

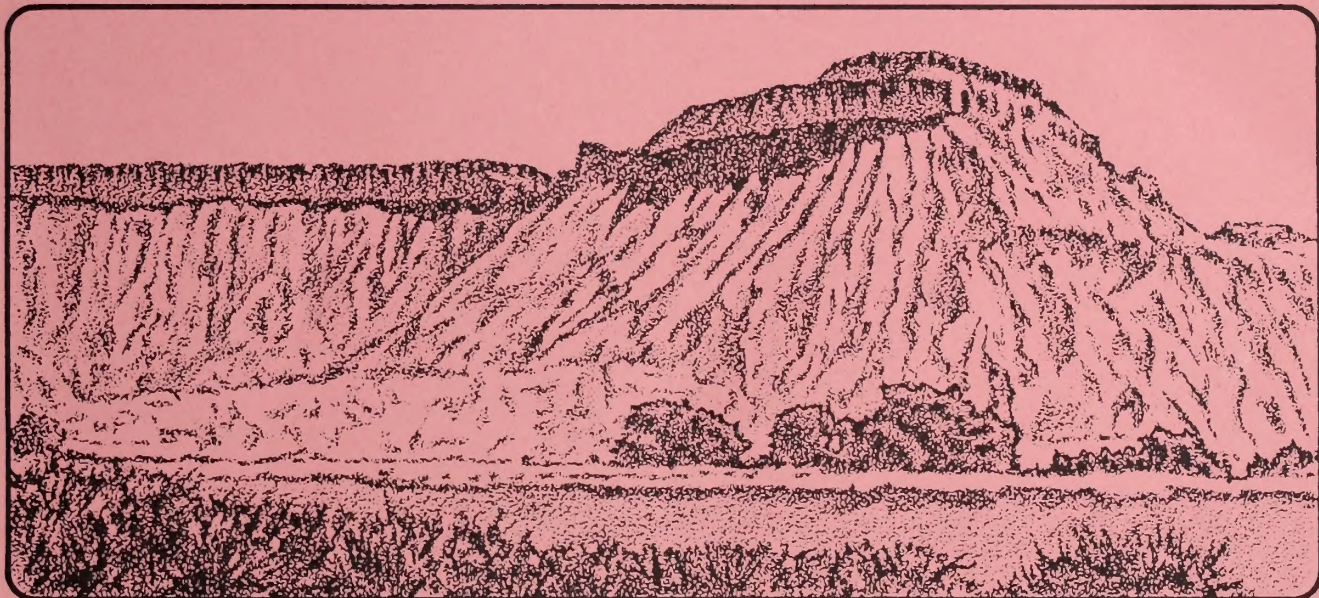
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January 1987

GRAND JUNCTION RESOURCE AREA



Resource Management Plan and Record of Decision

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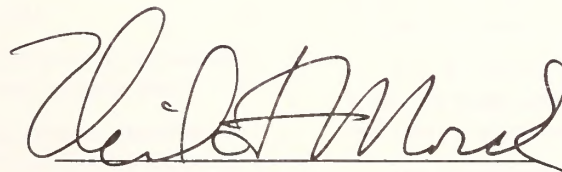
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GRAND JUNCTION RESOURCE MANAGEMENT PLAN

RECORD OF DECISION

Prepared by
GRAND JUNCTION DISTRICT
BUREAU OF LAND MANAGEMENT
U. S. DEPARTMENT OF THE INTERIOR

January 1987



State Director
Colorado State Office

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Denver, Colorado



88018921

RECORD OF DECISION

Grand Junction Resource Management Plan

Grand Junction Resource Area

Grand Junction, Colorado

This document records the decisions reached by the Bureau of Land Management (BLM) for managing 1,280,060 acres of public land in the Grand Junction Resource Area. The decisions, which are summarized below, are more fully described in the resource management plan that follows.

Decision

The Grand Junction Resource Management Plan is approved. The plan was prepared under the regulations for implementing the *Federal Land Policy and Management Act* (FLPMA) of 1976 (43 CFR 1600). An environmental impact statement was prepared for this plan in compliance with the *National Environmental Policy Act* (NEPA) of 1969. The plan is identical to the one set forth in the proposed plan and associated final environmental impact statement published in November 1985. Major decision are:

- Withdraw an additional 171,320 acres from mineral entry.
- Identify approximately 390,000 acres of the Book Cliffs potential coal development area as acceptable for further coal leasing consideration.
- Increase fuelwood harvesting approximately 8 percent, from 2,600 to 2,800 cords per year.
- Manage deer, elk, and bighorn sheep as the key wildlife species on about 80 percent of the resource area.
- Continue to manage livestock grazing as described in the *Grand Junction Grazing Management Environmental Statement*. Reevaluate existing allotment management plans to ensure consistency with objectives for riparian and critical erosion area goals.
- Expand the Little Book Cliffs Wild Horse Range by 2,380 acres for a total of 30,261 acres and manage for 65 to 120 wild horses.
- Protect approximately 35 percent of the resource area's visual resources from impairment.

- Designate 480,110 acres as open, 640,323 acres as limited, and 156,627 acres as closed to off-road vehicle use. Allow competitive events and intensive off-road vehicle activity on approximately 11,000 acres.
- Recommend four wilderness study areas totaling 166,340 acres as preliminarily suitable for wilderness designation.
- Designate eight areas covering 23,240 acres as research natural areas, outstanding natural areas, and/or areas of critical environmental concern.
- Dispose of approximately 25,000 acres of mostly small, isolated, and difficult to manage public land tracts.

Alternatives Considered

Four alternatives for managing the resources were considered in the development of the plan: Continuation of Current Management, Protection, Commodity, and Preferred. These alternatives were described and analyzed in the draft and final environmental impact statements.

The Continuation of Current Management Alternative emphasized a level of management similar to the current level. It was the No Action Alternative required by the *National Environmental Policy Act*.

The Protection Alternative emphasized protection of natural settings and protection and enhancement of fragile and unique resources.

The Commodity Alternative emphasized development of resources that generate or produce goods, services, employment, and income.

The Preferred Alternative (called the Proposed Plan in the final environmental impact statement) emphasized protection of fragile and unique resources and production and development of renewable and nonrenewable resources. This alternative is the environmentally preferable alternative and the one that has been selected as the Grand Junction Resource Management Plan.

Mitigation Measures

All practicable measures will be taken to mitigate adverse impacts. These measures will be strictly enforced during implementation. Monitoring will tell how effective these measures are in minimizing environmental impacts. Therefore, additional measures to protect the environment may be taken during or following monitoring.

Public Involvement

The views and opinions of the public were sought throughout the development of the plan. Numerous formal and informal meetings were held with the public, county commissioners, and various interest groups. A 90-day public comment period was held to receive comments on the draft resource management plan and environmental impact statement (RMP EIS), and a 30-day protest period was held following publication of the final RMP EIS. Currently, over 900 individuals, organizations, companies, and state, federal, and local agencies are on the mailing list for the plan.

Protests

Six individuals or companies protested decisions proposed in the final RMP EIS. One protester was concerned with proposed oil and gas decisions; one, with proposed wilderness decisions; one, with proposed off-road vehicle decisions; and three, with proposed land tenure adjustment decisions.

All protests were resolved at the BLM Washington Office. Only one change was made to the plan in response to the protests. The change was to clarify intent regarding conveyance of mineral estate. The following phrase was added to the planned management action regarding mineral conveyance in the Land Tenure Adjustments section of the plan: "or where conveyance of the mineral estate is determined to be appropriate for an exchange proposal under Section 206 of FLPMA."

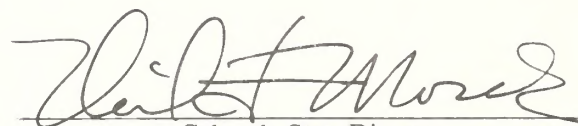
Consistency

The plan is consistent with plans and policies of state and local governments, of other federal agencies, and of the Department of the Interior and the Bureau of Land Management.

Public Availability of the Plan

Copies of the Grand Junction Resource Management Plan are available from the Area Manager, Bureau of Land Management, Grand Junction Resource Area, 764 Horizon Drive, Grand Junction, Colorado 81506, telephone (303) 243-6561. Copies may also be obtained from the Grand Junction District office at the same location as above or from the Colorado State Office, 2850 Youngfield Street, Denver, Colorado 80215.

Jan. 29, 1987
Date


Colorado State Director
Bureau of Land Management

GRAND JUNCTION

RESOURCE MANAGEMENT PLAN

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CHAPTER 1 INTRODUCTION

INTRODUCTION

The purpose of this book is to provide a comprehensive introduction to the field of artificial intelligence. It covers the basic concepts, methods, and applications of AI, as well as the current state of the field and future research directions.

Chapter 1: Introduction

CHAPTER 1 INTRODUCTION

CHAPTER 1

INTRODUCTION

INTRODUCTION

This resource management plan (herein referred to as this plan) contains the land use decisions, terms, and conditions for guiding and controlling future management actions in the Grand Junction Resource Area. All uses and activities in the resource area must conform with the decisions, terms, and conditions as described in this plan.

This plan describes in general terms the implementation, monitoring, and modification processes and tells how each resource will be managed, the order in which implementation actions will be carried out, and what support will be needed. It does not present information on environmental consequences, consistency, or effects of the management. This information was previously covered in the draft and final environmental impact statements.

In addition to this plan, a wilderness study report is being prepared. The wilderness study report will identify the preliminary recommendations for each wilderness study area. The report, along with a final environmental impact statement on the wilderness portion of this plan, will be submitted to Congress for action.

PURPOSE AND NEED

In the late 1960s and early 1970s, the Bureau of Land Management (BLM) prepared land use plans on small subunits of what is now the Grand Junction Resource Area. These plans, called management framework plans, provided management direction for various resources and resource problems. The Grand Junction Resource Area management framework plans are the Whitewater, Mount Garfield, Roan Creek/Winter Flats, Glade Park/Baxter-Douglas. Because of changing circumstances and conditions, including new legislation, changing policies and new land use conflicts and issues, a resource management plan was needed. The resource management planning effort was initiated in 1983 to cover the entire Grand Junction Resource Area.

In addition to meeting the requirements in the *Federal Land Policy and Management Act of 1976* for land use planning (43 CFR, Part 1600), this plan satisfies the BLM's policy to identify (1) public land suitable for wilderness designation (the study phase of BLM's wilderness review process); (2) land with potential for coal leasing (43 CFR, Part 3400); (3) public land as open, closed, or limited for

off-road vehicle use (Executive Order 11989); and (4) public land available for disposal and exchange.

DESCRIPTION OF PLANNING AREA

This plan was prepared for the Grand Junction Planning Area. The planning area boundary covers most of the Grand Junction Resource Area. The planning area boundary excludes the national forest land on the eastern and southern boundary of the Grand Junction Resource Area. The planning area and resource area boundaries are shown on Map 20, which is located in the back of this document.

The Grand Junction Resource Area is located in the extreme west-central portion of Colorado (Figure 1). It is bounded on the north by BLM's Craig District, on the south by BLM's Montrose District, on the west by the Moab, Utah, District, and on the east by the Glenwood Springs Resource Area. The city of Grand Junction is roughly in the center of the resource area.

The Grand Junction Planning Area encompasses approximately 2,021,775 acres of public, private, national forest, national park, and state lands (see Table 1). Of this, approximately 1,280,060 acres are public land administered by the BLM. The Grand Junction Resource Area is responsible for administering 1,459,391 acres of federal minerals that underlie both the public land (1,280,060 acres) and some private land (179,331 acres) within the planning area boundary.

Portions of the Montrose and Moab Districts were included in this resource management plan because three wilderness study areas extend into these districts and several livestock grazing allotments in the Moab District are administered by the Grand Junction Resource Area. These areas, consisting of approximately 108,703 acres, were included for wilderness and/or livestock grazing management only.

GRAND JUNCTION PLANNING AREA

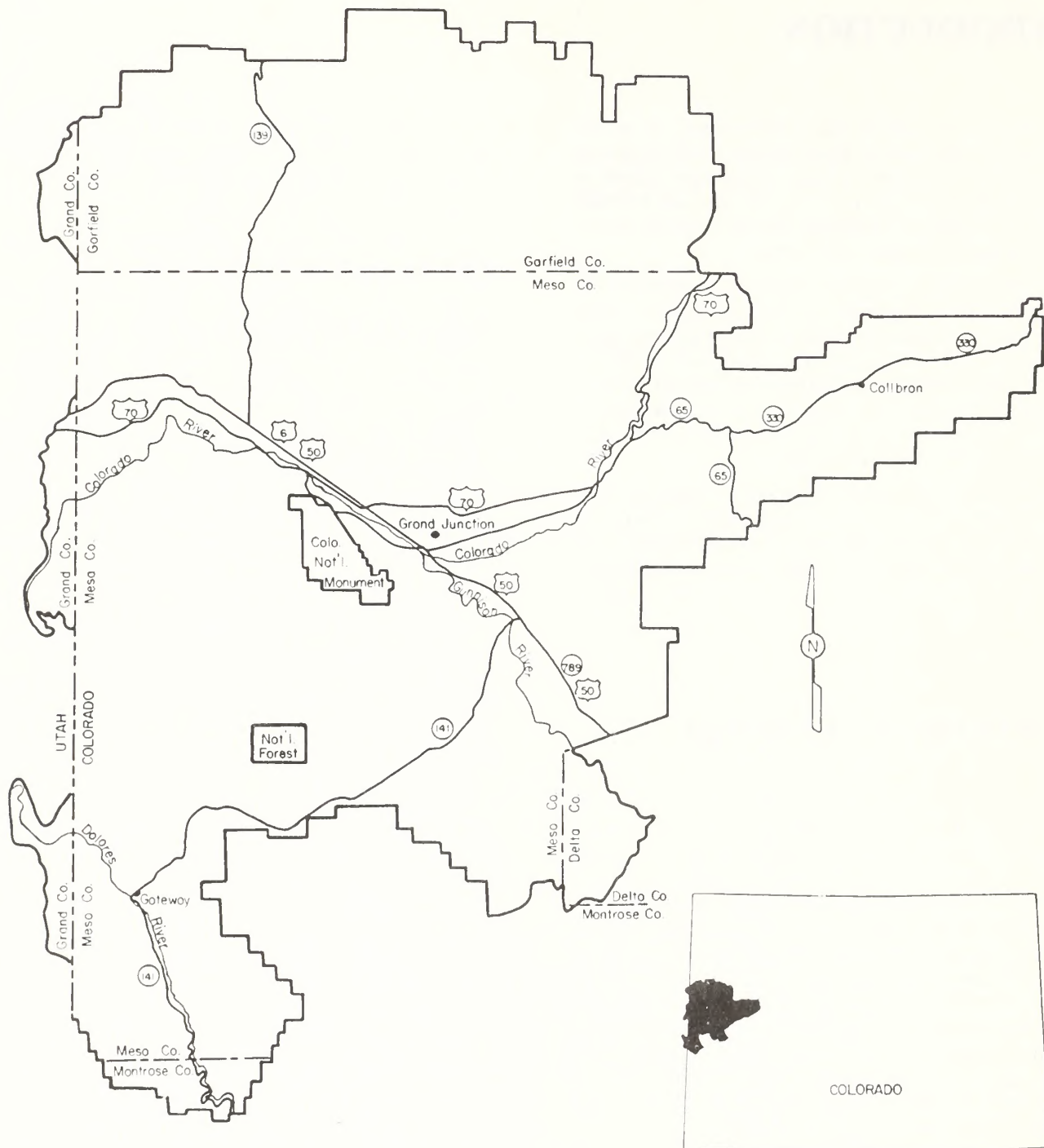


FIGURE 1

Table 1
Land Ownership in the Grand Junction Resource Area

Ownership	County				Total
	Delta	Garfield	Mesa	Montrose	
Public Land (Administered by BLM)	1,335	334,236	927,619	16,870	1,280,060
National Park Land	0	0	20,445	0	20,445
National Forest Land (Fruita Reserve)	0	0	7,680	0	7,680
State Land (DOW, Parks, State Land Board)	0	0	5,635	0	5,635
Private Land ¹	305	157,546	548,744	1,360	707,955
Total	1,640	491,782	1,510,123	18,230	2,021,775

Note: This table does not include 108,703 acres in Montrose and Moab Districts which are being analyzed for range or wilderness only.

¹ This includes about 179,331 acres of private surface with some reserved federal minerals.

IMPLEMENTATION

This plan will be tied to the budget process to ensure funds are available for the various implementation actions. Some decisions such as visual resource management classes will be implemented immediately upon signature of this plan. Other decisions will not be implemented immediately because they require additional site-specific planning and environmental analysis before actions can be taken on the ground. For example, the decision to manage an area for intensive recreation will require an activity plan. The activity plan will show project locations, describe and analyze the impacts of specific actions associated with development and operation, and compare project costs with project benefits.

The environmental impact statement prepared in association with this plan will be used as a base and incorporated by reference in any additional site or program-specific environmental analyses. Requirements for additional planning and analysis are incorporated in the decisions found in Chapter 2.

Several activity plans may be prepared for a specific geographic area or they may be combined. Whether to write individual or combined plans will be the decision of the area manager.

MONITORING

This plan will be monitored to ensure (1) projects are tied to the budget, (2) projects are implemented on the ground, (3) stipulations or restrictions are adhered to, and (4) support, work months, and procurement needed to implement the projects are considered.

This plan will be monitored to determine plan effectiveness. This type of monitoring will determine whether desired plan objectives are being achieved, whether original assumptions were correctly applied and impacts correctly predicted, whether mitigation measures are satisfactory, and whether changes need to be made. For example, monitoring a timber sale reveals that the stipulation restricting clearcuts to 40 acres or less to protect wildlife habitat is unnecessary. Monitoring data shows that clearcuts could be increased to 80 acres without being detrimental to wildlife habitat.

This plan also will be monitored to review and evaluate the plan as a whole to determine the need for revision or amendment.

MODIFICATION

This plan may be changed, if necessary, through amendment. Monitoring and evaluation findings, new data, and new or revised policies will be evaluated to determine whether an amendment is needed. Any change in circumstances or conditions that affect the scope, terms, or conditions of the plan may warrant an amendment. In all cases, a proposed action that does not conform with the plan and warrants further consideration before a plan revision is scheduled will require an amendment. The amendment process is identical to the resource management planning process, but the scope of information, analysis and documentation is more limited. Generally, an amendment is site specific or involves only one or two planning issues.

This plan may be revised when it becomes outdated or otherwise obsolete. A plan revision, when necessary, involves the preparation of a new resource management plan for the entire resource area.

The public and other agencies will be included in the amendment and revision processes.

MAINTENANCE

This plan will be updated as necessary to keep it current without changing its scope or intent. Plan maintenance may not affect decisions, conditions, terms, or level of resource use or restrictions from that prescribed in the plan. Maintenance activities may consist of posting new information or refining an analysis or making minor changes.

VALID EXISTING RIGHTS

This plan may not repeal valid existing rights on public land. Valid existing rights are those claims or rights to public land that take precedence over the actions in this plan. For example, a mining claim issued prior to the preparation of this plan in an area withdrawn from mineral entry through the plan may be valid. Valid existing rights may be held by other federal agencies or by private individuals or companies. Valid existing rights may also pertain to oil and gas leases, rights-of-way, and water rights.

RELATION OF THIS PLAN TO OTHER BLM PLANS AND STUDIES

Development of a resource management plan occurs within the framework of the BLM planning system. The planning system is subdivided into three distinct tiers for operational purposes. The Council on Environmental Quality (CEQ) regulations provide for tiering to aid compliance with NEPA (40 CFR 1500-1508). The three general tiers in the BLM planning system are policy planning, land use planning, and activity or program-specific planning. This plan satisfies the requirements for the land use tier of planning.

A wilderness study report is being prepared as a result of this land use planning effort. The wilderness study areas in the Grand Junction Resource Area are being studied to determine whether or not they are suitable for inclusion into the National Wilderness Preservation System. The information generated in this plan will contribute to the development of the legislative EIS and the wilderness study report. The wilderness study report will contain the preliminary recommendation for each wilderness study area and document the considerations that led to the recommendations. The wilderness study report and the EIS will be transmitted by the President to the Congress for appropriate action.

ADMINISTRATIVE ACTIONS

Various types of administrative actions will require special attention beyond the scope of this plan. Administrative actions are the day-to-day transactions required to serve the public and to provide optimal use of the resources. These actions are in conformance with this plan. They include issuance of permits for fuelwood, sawtimber, Christmas trees, and competitive and commercial recreation activities; lands actions, including issuance of grants, leases, permits, and resolution of trespass; facility maintenance; law enforcement; enforcement and monitoring of permit stipulations; cadastral surveys to determine legal land ownership; and engineering support to assist in mapping, designing, and implementing projects. These and other administrative actions will be conducted at the resource area, district, or state offices. The degree to which these actions are carried out will be based upon BLM policy, available personnel, and funding levels.

CHAPTER 2 DECISIONS

INTRODUCTION

Chapter 2 discusses the importance of decisions in management and the role of the manager in making decisions. It also discusses the different types of decisions and the factors that influence decision-making.

MANAGEMENT DECISIONS

Management decisions are those decisions that are made by the manager in the course of his or her duties. They are decisions that affect the organization as a whole and are made at the strategic level.

CHAPTER 2 DECISIONS

1.1 THE DECISION-MAKING PROCESS

The decision-making process is the process by which a manager selects a course of action from among several alternatives. It is a process that involves the identification of a problem, the gathering of information, the evaluation of alternatives, and the selection of a course of action.

1.2 TYPES OF DECISIONS

There are two main types of decisions: structured decisions and unstructured decisions. Structured decisions are those decisions that are made in a routine, repetitive manner. Unstructured decisions are those decisions that are made in a non-routine, non-repetitive manner.

1.3 THE IMPORTANCE OF DECISIONS

Decisions are the lifeblood of management. Without decisions, a manager would be unable to lead his or her organization. Decisions are also the key to success in business.

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CHAPTER 2

DECISIONS

INTRODUCTION

Chapter 2 describes the resource management plan. It is divided into two major sections — Decisions by Resource and Decisions by Emphasis Area. The first section describes management of individual resources. The second describes management of geographic pieces of land called emphasis areas.

Priorities have been established for implementing decisions that need additional planning and analysis prior to implementation. These priorities were established first by the large geographic areas shown on Figure 2 and then by smaller areas. The priorities for the smaller areas are discussed in the Decisions by Resource section of this plan. These are the areas where work will be concentrated first, second, and so on.

Priorities in this plan are intended to guide the order of implementation. They may be modified if circumstances dictate; however, they will be adhered to if at all possible. Priorities will be reviewed annually to help develop the annual work plan (budget) commitments for the upcoming year. They will be revised based upon new administrative policies, new Departmental policies, or new Bureau goals.

Throughout this chapter, references are made to maps that display planned actions by resource and emphasis area. These maps are located in the back of this document and in the map pocket.

DECISIONS BY RESOURCE

This section describes planned management actions, gives a rationale for the decisions regarding the planned actions, tells how the planned actions will be implemented and in what order, and outlines the support needed to implement the planned actions.

Air Quality Management

Objective

To limit air quality degradation in the resource area by ensuring public land use activities are in compliance with federal, state and local legislation.

Planned Management Actions

- Inventory existing air quality (cooperatively with other agencies) to establish a baseline from which to measure changes associated with Bureau of Land Management (BLM) or other agency proposals.
- Predict future impacts from BLM actions prior to implementation of those actions.
- Design proposed projects so as not to further degrade existing air quality within the Grand Junction nonattainment area.
- Predict future impacts from externally initiated actions prior to approval of those actions. Comply with all applicable local, state, and federal regulations to limit air quality degradation.

Rationale

Preservation of air quality is important to public health and welfare (local economy, aesthetics, etc.), but development in the resource area (through industrialization and population growth) will cause deterioration. In certain areas, the existing air quality is so pure and unique that special legislation has been passed to limit significant deterioration (PSD Class I and Colorado Category I areas); however, the BLM's ability to limit regional impacts is limited. Specifically, the BLM will continue to comply with all applicable local, state and federal air quality regulations in order to limit air quality degradation due to BLM activities.

Implementation of Planned Management Actions

Air quality management decisions became effective upon signature of this plan. Additional planning will not be

GRAND JUNCTION PLANNING AREA

GEOGRAPHIC PRIORITY AREAS

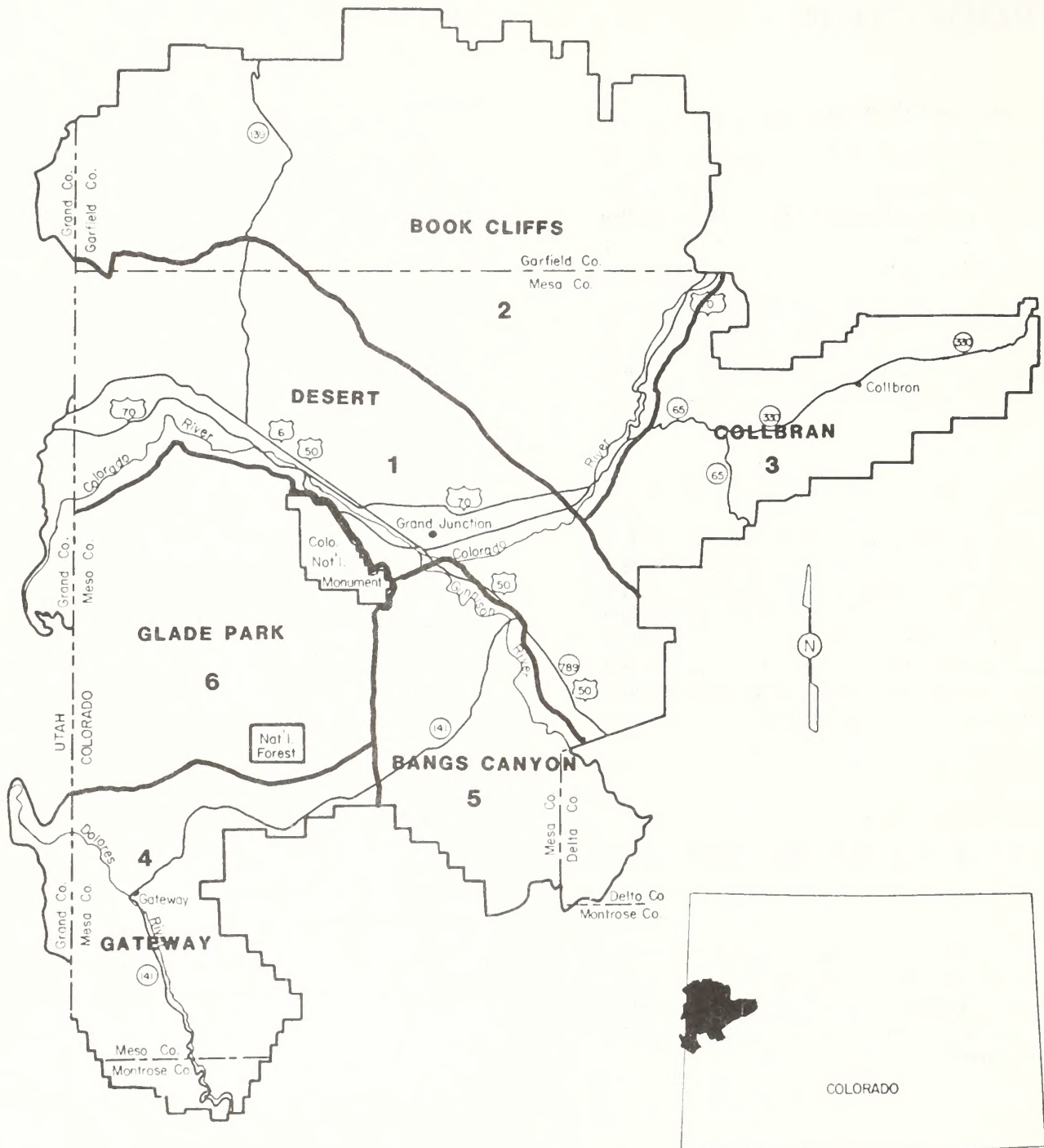


FIGURE 2

required. Site specific project proposals affecting public land and adjacent lands will be reviewed for compliance with existing laws and policies protecting these areas. Mitigation will be incorporated into project proposals to reduce air quality degradation.

Implementation Priorities

Priority 1

Evaluate and predict future impacts from BLM initiated or approved activities, including incorporation of impact minimizing mitigation measures where appropriate.

Priority 2

Continue to monitor existing conditions to evaluate air quality management effectiveness and trends.

Support

Request technical support from the BLM Colorado State Office air resource specialist and other air quality specialists in the State of Colorado Department of Health, Air Pollution Control Division; U.S. Environmental Protection Agency, Region VIII; the U.S. Forest Service, Region II; and the National Park Service, Rocky Mountain Region. Each of these other agencies have unique responsibilities under the Clean Air Act.

Soils Management

Objective

To reduce soil erosion and sediment yield, costs associated with unsuccessful land/vegetation treatment projects on unsuitable soils, hazards to life or property from soil failure due to the use of unsuitable soils; to maintain long-term soil productivity; and to provide for the safe and proper use of soils.

Planned Management Actions

- Treat or limit uses of soils in areas listed in Table 2.
- In the remainder of the resource area, analyze proposed surface-disturbing projects to determine suitability of soils to support such projects.

Table 2
Areas Identified for Treatment or Protection

Area	Acres	Management Action
Critically-eroding soils in Cactus Park	1,000	Limited access to area, land treatment (including gully plugs, reseeding, diversion and water retention structures).
Soil slump hazard areas Baxter-Douglas Pass Plateau Canyon	18,000 860	No surface occupancy stipulation (see also slopes greater than 40 percent).
Slopes greater than 40 percent	---	No surface occupancy; allow other surface-disturbing activities only after analyzing site-specific conditions and potential for safety hazards and reclamation

Rationale

The areas and management actions listed in Table 2 were selected with recognition of the economic costs of ignoring soils limitations and the long-term consequences of soil loss and decreasing productivity. Specifically, the following criteria were used to identify management areas and planned actions to meet the overall objective.

1. Suitability of the soil to support the project (or the soil limitations that may lessen or prevent the project's success).
2. Special safety hazards associated with particular soils or soil characteristics; i.e., slumping or mass movement.
3. Critical erosion areas in which land treatments or other practices have a high probability of reducing soil loss and degradation of water quality.
4. Slopes over 40 percent, as the susceptibility to accelerated erosion and mass movement are generally much greater than on less sloping areas.

Implementation of Planned Management Actions

Soils management decisions became effective upon signature of this plan.

To implement the planned management actions in Table 2 for Cactus Park, additional planning will be required. An activity plan will be prepared that outlines types of treatments.

To implement the remaining decisions, project proposals will be reviewed to determine suitability of soils to support such projects. On suitable soils, projects will be designed so as to minimize soil loss or prevent soil slumping. Standard design practices (Appendix B) and oil and gas stipulations (Appendix D) will be included in project designs where applicable. On unsuitable soils, projects will be denied or moved to a more suitable location.

Implementation Priorities

Priority 1

Analyze each proposed project for compatibility with the soil and determine potential limitations for specific uses.

Priority 2

Prepare an activity plan to implement management actions in Cactus Park.

Support

Request support from all resources in designing projects so as to reduce soil erosion and enhance soil productivity. Request support from Division of Operations to implement the land treatments (including structures) in Cactus Park.

Water Resource Management

Objective

Maintain or improve existing water quality in the resource area when possible.

Protect the municipal watersheds providing domestic water for the cities of Palisade and Grand Junction.

Planned Management Actions

- Treat 63.3 miles of critically-eroding stream channels (Table 3, Map 1).
- Treat 169,600 acres to reduce sediment (Table 3, Map 1).
- Treat 146,300 acres to reduce salinity (Table 3, Map 2).
- Limit surface-disturbing activities in the Palisade and Grand Junction municipal watersheds and the Jerry Creek Reservoirs (Table 3, Map 2).

- Continue studies in the Badger Wash hydrologic study area and the Sinbad Salinity Control Project area (Table 3, Map 2).
- Maintain existing sediment and salinity control structures in Indian Wash and Leach Creek.
- Maintain or improve water quality on the remaining public land in the resource area by incorporating site-specific mitigation or improvement measures into other resource program projects that have potential to affect water quality.

Table 3
Water Resources Management Decisions

Management Actions	Acres
Stream channel treatment (total miles)	63.3
Sediment reduction	
Rough Canyon area	8,500
Cactus Park	1,500
Upper Big Wash	1,500
South of South Shale Ridge and north of Sulphur Gulch	9,700
Northwest of Corcoran Wash	3,800
East of Lower Roan Creek	3,100
East of De Beque cutoff road	2,200
Grand Valley desert	117,000
Snyder Canyon	900
Calamity and Blue Creeks	3,300
Dolores River area	18,100
Total	169,600
Salinity reduction	
Rough Canyon area	3,700
Upper Big Wash	1,200
South of South Shale Ridge and north of Sulphur Gulch	6,500
East of Roan Creek	1,000
East of De Beque cutoff road	900
Grand Valley desert	133,000
Total	146,300
Municipal watershed protection	
Palisade municipal watershed	14,000
Grand Junction watershed and Jerry Creek Reservoirs	2,400
Badger Wash study area	685
Sinbad Valley Salinity Project	50
Sediment and salinity project maintenance	
Leach Creek	2,040
Indian Wash	4,020
Total	6,060

Rationale

Sediment control structure maintenance and treatment of critically-eroding stream channels and areas of high sediment and salinity production improve water quality within the resource area. This complies with state and federal law, approved water quality standards, and with BLM policy and regulations.

Municipal watershed protection assures an adequate supply of good quality drinking water. This minimizes treatment costs for the municipalities.

Implementation of Planned Management Actions

Water resources management decisions became effective upon signature of this plan.

Implementation of decisions to treat and protect areas will require additional planning. First, a field review of treatment and protection areas to assess management and treatment opportunities will be conducted. Then, activity plans will be prepared for these areas. These plans will outline treatment techniques, locations, objectives, monitoring and evaluation requirements, benefit/cost analysis, and include an environmental analysis. The treatments or proposed management will then be implemented as funding and district priorities dictate. Upon evaluation, the plan will be amended if needed.

To implement other decisions, project proposals will be reviewed to determine impacts on water resources. Projects will be designed to minimize or prevent impacts on water resources. Standard design practices (Appendix B) and oil and gas stipulations (Appendix D) will be included in the design where applicable.

Implementation Priorities

Protection of the Palisade municipal watershed, Jerry Creek Reservoirs, and Juniata and Hollenbeck Reservoirs will be implemented directly out of this plan. As such, they are not prioritized.

The Sinbad Valley Salinity Study will be a cooperative effort with the Bureau of Reclamation, with Reclamation having the lead responsibility. BLM's role is one of support and, therefore, will comply with Reclamation's schedule. Reclamation anticipates project funding commencing in fiscal year 1988.

Priority 1

Develop and implement a watershed activity plan for the Grand Valley desert area. Sediment and salinity reduction in the Grand Valley and channel stabilization opportunities in Hunter Wash, Big Salt Wash, and East Salt Creek will be assessed.

Priority 2

Evaluate sediment and salinity reduction opportunities within the Roan Creek watershed and upper Big Wash areas. Formalize and implement through the activity planning process. Consider channel treatment opportunities in Horseshoe Canyon, along two tributaries of Dry Fork, and Sand Wash.

Priority 3

Assess sediment reduction and channel treatment opportunities within the Blue Creek and Calamity Creek watersheds. Develop and implement a watershed activity plan on the area.

Priority 4

Develop and implement watershed activity plans for the Dolores River area. Evaluate sediment reduction and channel treatment opportunities for Bull Draw and three tributaries of the Dolores River.

Priority 5

Develop and implement watershed activity plans in the Rough Canyon, Cactus Park, and Snyder Canyon areas. Assess channel treatment opportunities for two channels in Cactus Park. Evaluate management and treatment options to reduce sediment and salinity water quality impacts on the remainder of these three areas.

Support

Sediment and salinity control structures will generally require the filing of a permit with the Colorado State Engineer. Structures constructed in perennial streams, or with a storage capacity of greater than 10 acre-feet or dams with more than 15 feet in height will require a water right. Engineering support will be required for the survey, design, and construction of most projects benefiting water quality.

Locatable Minerals Management

Objective

To make public land available for exploration and development under the general mining laws unless otherwise withdrawn from mineral entry to protect other resources.

Planned Management Actions

- Allow mineral exploration and development on lands open to location (Table 4).
- Continue to close areas under existing withdrawals (124,443 acres).
- Petition the Secretary of the Interior to withdraw the utility corridor, recreation sites, and Ruby Canyon from mineral entry (Table 4).
- Close the areas recommended for additional withdrawals (Table 4) once they are formally withdrawn and/or designated as wilderness by Congress.

Table 4
Locatable Minerals Management

Management Actions	Acres
Open to location	1,163,628
Closed to location:	
Existing withdrawals	124,443
Additional withdrawals	171,320
Wilderness study areas: ¹	
Black Ridge Canyons and Black Ridge Canyons West WSAs	73,937
Sewemup Mesa WSA	18,835
Dominguez Canyon WSA	73,568
Other areas:	
Utility corridor	860
Recreation sites	120
Ruby Canyon	4,000
Total	171,320
Total Existing and Additional Withdrawals	295,763 ²

¹ Wilderness study areas (WSAs) will remain open to location until designated by Congress as wilderness.

² Includes 24,480 acres covered under P.L. 359.

Rationale

The development of locatable minerals could be important to the local economy and is important to the nation. Therefore, only existing withdrawals and areas containing fragile resources that could be easily impacted by mineral development were identified for withdrawal from mineral entry. These restrictions were considered to be the only option for adequately protecting the unique or fragile resources present at those locations. All restrictions would be subject to valid existing rights.

Implementation of Planned Management Actions

The decision to open areas to location and to continue closures on existing withdrawals became effective upon signature of this plan. In areas identified as open to location, mining claimants must notify the BLM office prior to developing a mining claim. This is required under *43 CFR 3809, Surface Management of Public Lands under the U.S. Mining Laws*.

The decision to recommend additional withdrawals became effective upon signature of this plan. The recreation sites, utility corridor and Ruby Canyon will not be closed until they are formally withdrawn under the general mining laws. To do this, the BLM must petition the Secretary of the Interior to withdraw the lands. The areas recommended for wilderness designation will not be closed until they are designated wilderness by Congress. Pending this designation, they will be open to location activities that do not impair their suitability for wilderness designation.

Implementation Priorities

Priority 1

Petition the Secretary of the Interior to formally withdraw Ruby Canyon, recreation sites, and utility corridors.

Support

Request support from other resource specialist to review and provide input into approval of a plan of operations or for comments on a notice of intent. Request support by the local BLM office to prepare formal withdrawal reports.

Coal Management

Objective

To identify areas that are acceptable for further leasing consideration under the federal coal leasing program.

Planned Management Actions

- Identify 350,389 acres (Map 3) as acceptable for further mining. Include in this acreage the Demaree and Little Book Cliffs Wilderness Study Areas, which are unsuitable pending congressional action on wilderness recommendations, and the Little Book Cliffs Wild Horse Range, which is acceptable pending further study.
- Identify the Colorado River corridor (4,100 acres) as unsuitable for mining. Also identify the Palisade municipal watershed (10,000 acres) as unsuitable pending further study. The Federal Aviation Administration lease is included within the Palisade municipal watershed acreage (Table C-1, Appendix C).

Rationale

The development of coal is important to both the local economy and the nation. Therefore, only lands with high development potential containing resources that could be significantly impacted by coal development were identified as unsuitable for further leasing consideration. The Colorado River corridor was excluded because Interstate 70 on the east side of the Colorado River and the Denver and Rio Grande Western Railroad on the west side, including lands within 100 feet of the outside of both rights-of-way, are unsuitable based on Criterion 3 of 43 CFR 3461.1. The Palisade municipal watershed was found unsuitable based on Criterion 17. It was identified for further study because the boundaries are undefined and the effects of underground mining on water quantity are unknown.

All restrictions are subject to valid existing rights.

Implementation of Planned Management Actions

Areas identified suitable and unsuitable for further coal leasing consideration became effective upon signature of this plan. Additional planning and environmental analysis will be required prior to offering any lands for lease. Potential coal tracts will be delineated based on lands identified in this plan as suitable for further coal leasing consideration. Site-specific environmental assessments that include lease

stipulations will be prepared for each potential lease tract. A regional environmental impact statement will then be prepared on leasing these and other tracts in the region. This process will involve industry, the regional coal team, governmental agencies, and the public. The Secretary of the Interior will make the final decision on which tracts to offer, the lease stipulations, and the sale dates.

Implementation Priorities

None

Support

Request cadastral survey support for locating potential coal lease tracts in the Book Cliffs and Grand Mesa coal fields.

Oil and Gas Management

Objective

To make federal oil and gas resources available for leasing, except where prohibited by law or where administrative action is justified in the national interest; to make public land available for economically and environmentally sound exploration and development projects; to avoid health and safety hazards; to protect important, sensitive resource values from unacceptable impacts; and to minimize the impacts to lessees from sensitive resource protection and hazard avoidance.

Planned Management Actions

- Place the federal oil and gas estate in the leasing categories shown in Table 5 (Map 5) and apply stipulations listed in Table 6 to areas open for leasing with stipulations.

Rationale

This type of oil and gas management will allow leasing of all high development potential lands and most moderate and low development potential lands. It also will allow access

Table 5
Oil and Gas Leasing Categories

Categories	Acres ¹
Open to leasing:	
Without stipulations ²	653,868
With stipulations	
No surface occupancy	132,078
Others	555,655
Total	1,341,601
Closed to leasing ³	117,790

Note: This table shows acres within the wilderness study areas in the Grand Junction Resource Area only.

¹ These acreages include federal oil and gas estate on lands with both federal and privately controlled surface estate.

² These areas include the standard lease terms as of March 1985.

³ Wilderness study areas are presently closed to leasing, pending congressional action. This table shows proposed leasing categories following congressional action.

to areas that can be explored and developed in an economically and environmentally sound manner, protect sensitive resources, avoid known health and safety hazards, and minimize the impacts to lessees from sensitive resource protection and hazard avoidance.

All lands in the resource area were left open to leasing except for wilderness study areas, which are closed by law.

Less restrictive stipulations than those shown in Appendix D would not meet the objectives of this plan and would not provide adequate protection of the sensitive resources identified in Table 6.

Implementation of Planned Management Actions

The oil and gas leasing decisions became effective upon signature of this plan. Additional work will be required to facilitate implementation of the decisions:

1. The resources of concern (Table 6) will be mapped. These maps will be used to make composite maps showing the leasing category of all lands.
2. Leasing information will be provided to the BLM Colorado State Office for use in future oil and gas leasing.
3. Activity plans will be prepared to refine decisions made in this plan. The composite maps and standard design practices listed in Appendix B will be used to prepare the activity plans. Activity plans will guide development of oil and gas leases and will show preferred access routes, preferred utility routes, and preferred drill site

locations. They also will list the stipulations and mitigation measures that should be applied in the activity plan areas.

Implementation Priorities

Priority 1

Prepare leasing information and submit to the Colorado State Office. This involves compiling and mapping all resource information and determining the appropriate leasing categories and stipulations.

Priority 2

Prepare activity plans for the entire resource area in the following order:

1. All High Development Potential Lands. (a) Douglas Pass/Baxter Pass area; (b) Little Book Cliffs area (including the Little Book Cliffs WSA); (c) the Book Cliffs west of Highway 139; and (d) all other high development potential lands.
2. All Moderate Development Potential Lands. The activity plan areas and priority of completion will be determined after completion of high development potential lands.
3. All Low Development Potential Lands. The activity plan areas and priority of completion will be determined after completion of moderate development potential lands.

Priority 3

Update the leasing categories and stipulations and amend activity plans to reflect new resource information. This should be done on an annual bases after completion of Priority 1.

Support

Request support from Cadastral Survey to locate public land boundaries.

Mineral Materials Management

Objective

To make available areas for the disposal of mineral material while protecting other resource values.

Table 6
Areas Available for Leasing with Stipulations

Resource Concern and Areas	NSO Stipulation (Acres)	Stip. No.*	Other Stipulations (Acres)	Stip. No.*
SOILS MANAGEMENT				
Douglas/Baxter soil slumps	18,000	1		
Plateau Creek slump	860	1		
Steep slopes			200,000	3
Subtotal	18,860		200,000	
WATER RESOURCES				
Badger Wash study area	685	1		
Palisade municipal watershed			14,000	6
Grand Junction municipal watershed	1,240	1		
Jerry Creek Reservoirs			1,160	6
Perennial streams			6,145	7
Indian Wash dam			10	8
Subtotal	1,925		21,315	
GEOLOGY/PALEONTOLOGY				
Fruita Paleo Site	280	1		
Rabbit Valley paleo site	280	1		
Gunnison Gravels			5	8
Subtotal	560		5	
WILDLIFE				
Deer and elk winter range			238,820	12
Bighorn sheep range			6,200	9
Elk calving areas			7,139	4
Skipper's Island	160	1		
Rough Canyon	(1,470)	1		
Subtotal	160		252,159	
THREATENED AND ENDANGERED SPECIES MANAGEMENT				
Bald eagle concentration areas			37,305	14
Peregrine falcon habitat			30,875	14
Black-footed ferret			21,488	13
Spineless hedgehog cactus			59,052	13
Uinta Basin hookless cactus			131,503	13
Pyramid Rock	470	1		
Unaweep Seep	440	1		
Colorado cutthroat trout			100	13
Subtotal	910		280,323	
WILD HORSE MANAGEMENT				
Wild horse range			30,261	2
Wild horse winter range			(6,500)	10
Wild horse foaling area			(6,500)	11
Subtotal			30,261	
VISUAL RESOURCE MANAGEMENT				
Juanita Arch	40	1		
The Goblins	80	1		
Face of the Book Cliffs			(13,000)	2
Ruby Canyon	8,000	1		

(Table 6 continued)

Resource Concern and Areas	NSO Stipulation (Acres)	Stip. No.*	Other Stipulations (Acres)	Stip. No.*
Dolores River corridor	17,000	1		
Gunnison River corridor	8,960	1	9,040	2
South Shale Ridge			22,500	2
Mount Garfield cliffs	9,520	1		
Grand Mesa slopes			9,600	2
Bang's Canyon area	14,080	1	25,920	2
Sinbad Valley area	1,920		7,490	2
Granite Creek area	2,240	1	12,760	2
Unaweep Canyon area	14,080	1	6,400	2
Hunter/Garvey Canyons area	7,600	1	11,400	2
Vega Reservoir viewshed	120	1		
Highway corridors			34,220	2
Black Ridge corridor	860	1		
Subtotal	84,500		134,330	
CULTURAL RESOURCE MANAGEMENT				
Indian Creek	350	1		
Rough Canyon	(1,000)	1		
Cactus Park	1,000	1		
Sieber Canyon	300	1		
McDonald Creek	160	1		
3ME1358	35	1		
Ladder Springs	640	1		
Transect 7			9,000	5
Subtotal	2,485		9,000	
RECREATION RESOURCE MANAGEMENT				
The Palisade ONA	19,178	1		
Developed recreation sites—BLM	160	1	740	2
Island Acres recreation site	80	1		
Vega Reservoir recreation site	2,160	1		
Highline Reservoir recreation site	1,100	1		
Rough Canyon ACEC	(2,560)	1		
Hunter/Garvey Canyon	(7,600)	1	(11,400)	2
Granite Creek	(2,240)	1	(12,760)	2
Bang's Canyon	(14,080)	1	(25,920)	2
Ruby Canyon	(8,000)	1		
Dolores River corridor	(17,000)	1		
Gunnison River corridor	(8,960)	1	(9,040)	2
Subtotal	22,678		740	
Gross Total	132,078		909,323	
Estimated overlap between stipulations			377,478	
Adjusted Total	132,078		555,655	

* See Appendix D for description of stipulations.

** Parentheses indicate total overlap with another restriction not included in subtotals or gross total.

Planned Management Actions

- Allow disposal of mineral material on public land not closed to such development (1,171,215 acres)(Map 6).
- Continue existing closures on 6,188 acres.
- Close an additional 305,429 acres where mineral material sales would conflict with the resources or uses shown in Table 7.

Table 7
Mineral Materials Sales Closures

Area and Reason for Closure	Acres
Badger Wash hydrologic research area	685
Grand Junction municipal watershed	1,240
Jerry Creek Reservoirs (municipal watershed)	1,160
Baxter/Douglas soil slump hazard area	18,000
Plateau Creek soil slump hazard area	860
Rabbit Valley and Fruita paleontological sites	560
Elk calving area	400
Unaweep Seep (threatened and endangered species habitat)	440
Pyramid Rock (Uinta Basin hookless cactus habitat)	470
Little Book Cliffs Wild Horse Range	30,261
Cultural sites	2,485
Recreation sites and visual resource management class II areas	75,480
Areas recommended for wilderness designation	166,340
Utility corridors	860
Total	305,429

Rationale

The disposal of mineral material is very important in the local area, particularly in the form of free use permits to county governments. Therefore, the entire resource area has been left open except for closure of a limited number of additional areas as shown in Table 7. These areas are closed (including those already in place) to protect those fragile resources easily impacted by mineral material development. The additional restrictions are consistent with the existing minerals management policy. All restrictions would be subject to valid existing rights. Also, the disposal of mineral materials is a discretionary action that can be disallowed where important resources would be adversely impacted.

Implementation of Planned Management Actions

Mineral materials management categories became effective upon signature of this plan. Applications for free use or purchase of mineral materials will be compared with management categories. Applications in closed areas will not be considered. Those in existing common use areas will be approved without additional environmental analysis. Those outside common use areas will require additional environmental analysis prior to approval.

The opening of any new common use areas will require an activity plan and an environmental assessment.

Implementation Priorities

Priority 1

Prepare an activity plan environmental assessment for mineral material disposal.

Support

Request support from Division of Operations to construct and/or upgrade roads into existing and new BLM managed disposal areas.

Request support from other resource specialists for information and review of environmental documents for disposal of mineral material.

Paleontological Resource Management

Objective

To manage the paleontological resource program to protect significant paleontological values.

Planned Management Actions

- Place the Morrison and Wasatch Formations (433,760 acres) in a Class I paleontology category (Map 7).
- Place the remainder of the resource area in either a Class II or Class III category.
- Designate the Fruita and Rabbit Valley paleontological sites as research natural areas and also as areas of critical environmental concern. Manage for educational and research purposes.

Rationale

Using existing information (literature searches, known sites and favorable depositional environments), formations were classified according to the likelihood of producing significant fossils, Class I areas being the most sensitive. The classifications determine the need for clearances prior to surface-disturbing activities. These clearances will aid in the identification and protection of those paleontological resources.

Implementation of Planned Management Actions

Paleontological classifications became effective upon signature of this plan. Surface-disturbing project proposals will be compared with paleontological classifications. In Class I areas, clearances will be conducted for all surface-disturbing projects. Any significant fossils (or diagnostic portions thereof) found during clearances in Class I areas will require mitigation measures to protect the fossil resource. In Class II and Class III areas, clearances will not be required. If any fossils are found in any area during project implementation, they will be evaluated for significance and mitigated as necessary to protect the fossil values.

The research natural area and area of critical environmental concern designations became effective upon signature of this plan. The designations are accomplished by placing a notice in the *Federal Register*. Both sites will continue to be managed as outlined in the Rabbit Valley and Fruita paleontological plans.

Implementation Priorities

Priority 1

Designate the Fruita and Rabbit Valley paleontological sites as research natural areas and areas of critical environmental concern through a *Federal Register Notice*.

Priority 2

Review the existing management plans for the Rabbit Valley paleontological site and Fruita Paleontological Site for consistency with this plan and revise, if needed.

Support

Support will be needed from the Division of Operations to keep fences, trails, and signs in good repair.

Forest Management

Objective

To manage the suitable pinyon-juniper woodlands and commercial forest land to maintain stand productivity and to help meet fuelwood and sawtimber demands.

Planned Management Actions

- Place the forest land administered by the BLM in the management categories listed in Table 8 (Map 8) and offer allowable harvest levels shown.
- Complete the timber production capability classification inventory of the commercial forest lands and recalculate the acreage suitable for management based on the results of the inventory. Calculate an annual allowable harvest for commercial forest land based upon the revised acreage.
- Offer an annual allowable fuelwood harvest of 2,800 cords (Table 8). Conduct a study to determine the amount of fuelwood being illegally harvested from public land and recalculate the allowable harvest for fuelwood based upon the results of the study.
- Use standard design practices listed in Appendix B and restrictions listed in Table 9 in designing forest product sales.

Table 8
Forest Management Categories

Category	Commercial Forest Land	Pinyon-Juniper Woodlands
Suitable for management (acres)	1,319	111,244
Unsuitable for management (acres) ¹	1,276	424,840
Unsuitable for management (acres) ²	36,510	---
Annual allowable harvest (cords)	---	2,800 ³
Annual allowable harvest (MBF)	0	---

Note: Commercial forest land species represented: Douglas-fir, aspen, spruce-fir, and ponderosa pine. Woodland species represented: pinyon pine, Utah juniper, and Rocky Mountain juniper.

¹ Based upon multiple use and timber production capability classification restrictions.

² Pending completion of timber production capability classification.

³ Reflects a 33 percent reduction to compensate for known trespass. This reduction is an estimate based upon field observation and public input.

Table 9
Restrictions in Selected Areas

Area	Restriction
Big Salt	Prohibit the cutting of dead pinyon-juniper fuelwood.
Little Book Cliffs Wild Horse Range	Limit fuelwood sales to 30 acres or less and to commercial operators only. Design fuelwood sales to meet management objectives for wild horses.
Bang's Canyon and The Palisade	Limit cutting areas to 20 acres or less; rehabilitate all new roads following logical development by blending them in with the characteristic landscape to make them unapparent to the casual observer.

Rationale

These actions will assure a continuous supply of forest products for negotiated and advertised sales without sacrificing other resource values such as wildlife and recreation.

Table 10 lists the reasons for identifying commercial forest land and woodlands as unsuitable.

Table 10
Unsuitability Rationale

Reasons	Acres
Commercial forest land unsuitable for management:	
Municipal watersheds	402
Recommended wilderness areas ¹	434
Recreation areas	40
Recreation/wildlife areas	400
Pending completion of TPCC	36,510
Total	37,786
Pinyon-juniper woodlands unsuitable for management:	
Poor stocking or steep slopes	401,400
Adverse location	4,738
Fragile soils	336
Municipal watersheds	955
Recommended wilderness ¹	15,717
Recreation areas	40
Recreation/wildlife areas	1,654
Pending completion of TPCC	0
Total	424,840

¹ These lands will be considered suitable for management and will be returned to the forest base if they are not designated wilderness.

Implementation of Planned Management Actions

Management categories for forest lands and on annual allowable fuelwood harvest of 2,800 cords became effective upon signature of this plan.

A woodlands management plan will be prepared in Fiscal Year 1986 for the resource area. This plan will identify specific management objectives and constraints, planned actions, will coordinate the various resource values, and identify harvest levels, cutting cycles, and silvicultural practices.

Planned management actions will be designed to meet wildlife objectives on big game winter ranges. Special restrictions will also be applied to planned management actions in the Big Salt, The Palisade, Little Book Cliffs Wild Horse Range, and Bang's Canyon areas to protect wildlife, visual, wild horses, and recreation values, respectively.

A study will be conducted when funding becomes available to determine the amount of pinyon-juniper fuelwood being illegally harvested from land administered by the BLM. The allowable harvest will be recalculated and adjusted accordingly based upon the results of this study.

The timber production capability classification for the commercial forest land will be completed when funding becomes available; this inventory will be done in accordance with BLM Manual 5251 (Timber Production Capability Classification). The results of this inventory will be used to recalculate the acreage of commercial forest land suitable for management and to calculate an allowable harvest.

Implementation Priorities

Priority 1

Prepare a woodlands management plan for the resource area.

Priority 2

Conduct a study to determine the extent of unauthorized fuelwood cutting on public land. Recalculate the allowable harvest for pinyon-juniper woodlands based upon the results of this study.

Priority 3

Complete the timber production capability classification for the commercial forest land. Calculate an allowable harvest for the commercial forest land.

Support

Request cadastral surveying and engineering support to help design and lay out sawtimber and fuelwood sales and access roads. Request access, transportation, and right-of-way support to acquire legal access to public land for fuelwood and sawtimber sales. Request wildlife, recreation, and transportation support in the design of management and sale plans. Request law enforcement support to curtail the illegal harvest of fuelwood.

Wildlife Management

Objective

To provide sufficient forage, cover, and protection from disturbance to maintain a population of 15,500 deer and 870 elk in summer and 34,400 deer and 2,950 elk in winter.

To maintain the existing species in the resource area, and improve the habitat of each species of game and nongame primarily according to the species' susceptibility to BLM influence and secondarily to the evidence of human demand.

To maintain the existing riparian acreage and manage it for the greatest diversity in plant heights and for the species appropriate (native) to each site.

To increase fish production on the producing aquatic areas and improve the cool water fisheries potential on marginal streams.

Planned Management Actions

- Manage deer habitat to allow deer to increase to 15,500 in summer and 34,400 in winter.
- Manage elk habitat to allow elk to increase to 870 in summer and 2,950 in winter.
- Actively manage the 22 streams (shown on Map 9) totaling 71 miles for sport fisheries.
- Actively manage the areas shown on Map 10 and listed in Table 11 placing management emphasis on the key species shown.
- Protect the habitat of bighorn sheep, deer, and elk (Map 11) by prohibiting disturbing activities in these areas during certain times of the year. Table 11 shows the acres protected by these seasonal stipulations.
- Protect elk calving sites, riparian areas, and Skipper's Island by prohibiting surface disturbance in these areas year round. Table 11 lists acres, and Map 11 shows the acres that encompass the actual sites where surface disturbance is prohibited.
- Use standard design practices listed in Appendix B in designing wildlife projects.

Rationale

Top priority was given to providing habitat for deer, elk and sport fisheries because big game hunting and fishing draw more out-of-state devotees to Mesa and western Garfield Counties than do any other wildlife based activities. The fisheries potential on public land is rather low which accounts for the relatively few miles of stream identified for active management. Conversely, the potential for supporting deer and elk populations is high, especially in the habitat management plan areas identified for deer and elk key species management. The public land carrying capacity for big game was targeted to meet Colorado Division of Wildlife goals.

Lower priority was given to providing habitat for wildlife species with lesser demand. Good stewardship of wildlife resources requires that care be given to providing precise habitat for the maintenance and continuation of these species. The habitat management plan areas identified for key species of these lesser known and demanded species offers that precise habitat.

Locations selected for protective management contain critical habitat for the species listed. Stipulations and restrictions were placed on other resource activities in these areas to protect this habitat and still permit a multitude of human uses.

Table 11
Wildlife Management Categories

Management Categories	Acres
Active habitat management:	
Sport fisheries management:	
Number of streams	22
Miles of stream	71
Habitat management plan (HMP) areas (and key species):	
Roan Creek (deer) ¹	259,475
Unawep Seep (Great Basin silverspot butterfly)	55
Kannah Creek (elk, deer, pronghorn, waterfowl)	62,000
Grand Valley (pronghorn, waterfowl, desert game)	147,100
Colorado River (bald eagle, other threatened and endangered species)	24,272
Pyramid Rock (Uinta Basin hookless cactus)	470
Badger Wash (sensitive plant)	1,520
Rough Canyon (endangered plant, sensitive plants and animals)	1,470
Book to Roan Cliffs (deer, elk, bear)	273,830
Aquatic-riparian (trout, riparian wildlife habitat)	(3,000) ²
Collbran (elk, deer)	81,000
Ute to Mesa Creek (deer, elk)	68,337
Unawep to Dugway (deer, elk)	30,000
Dolores West (deer, elk)	32,828
Bang's-Dominguez (deer, elk, bighorn sheep)	131,565
Glade Park (deer, elk, wild turkey, grouse)	77,554
Wilderness (pristine wildlife conditions)	90,104 ³
Protective habitat management:	
Seasonal stipulations:	
Deer and elk critical winter range and migration corridors	238,820
Elk calving area	7,139
Bighorn sheep range:	
Protected by special stipulations	6,200
Protected by wilderness or recreation designations	24,780
No surface disturbance stipulation (actual sites):	
Elk calving areas	500
Riparian area	6,145
Skipper's Island	160

¹ The Roan Creek HMP requires revision because it predates this plan.

² Acres not included in total 100 percent overlap with all others except Pyramid Rock.

³ Moab and Montrose Districts (47,200 acres) are not included in this total.

Probably the best and most broadly beneficial management focus on wildlife habitat is the one on riparian

habitat and its associated aquatic habitat. All riparian areas are uniquely valued in this plan. The specific protections and the actions (to be proposed in the habitat management plans) applied to riparian areas will benefit fish, terrestrial wildlife including game, nongame, and endangered species. The benefits also flow to other resources such as water quality and distribution, recreation, and downstream agriculture.

Implementation of Planned Management Actions

The decisions to actively manage and protect deer and elk habitats to allow deer and elk to increase became effective upon signature of this plan.

The decision to protect habitats by placing stipulations on disturbance type activities will be implemented by comparing activities proposed with areas identified for protective management. Applicable stipulations will be placed on projects that lie within the protected areas.

Additional planning will be required before the decision to actively manage wildlife habitats can be implemented. Habitat management plans outlining site-specific management will be written for active management areas.

Each habitat management plan targets key species to receive special attention. These species are listed in the legend of Map 10. A habitat management plan has three phases: (1) preparation or revision of plans, (2) installation or maintenance of approved projects, and (3) monitoring the effectiveness of the projects at achieving the plan objectives.

Implementation Priorities

Priority 1

Implement protection measures listed in Table 11.

Priority 2

Prepare and implement habitat management plans in the order listed in Table 11.

Support

Request support from forestry, recreation, lands and minerals to administer the protective stipulations within their permit programs. Request engineering, hydrologic, soils, and range support for project design, construction and maintenance. Request cultural (paleontological and archaeological) and threatened and endangered species expertise in project designing. Forestry and fire management practices often can be and will be made to mesh with wildlife habitat improvement plans. Request fisheries and riparian

to public land will be needed to construct and maintain projects, monitor habitat and provide for the enjoyment and management of wildlife populations. Request the Colorado Division of Wildlife to assist in habitat management plan development, implementation of habitat improvement projects, wildlife introductions, habitat monitoring, and cooperative management of public land. Request U.S. Forest Service cooperation on projects at the common boundary such as prescribed burns, stream improvements and habitat protection.

Threatened and Endangered Species Management

Objective

To conserve plants and animals (and their habitats) listed by federal and Colorado governments as threatened and endangered species, and to conserve plants and animals that are candidates for these lists.

To maintain at least the present populations of threatened and endangered species populations and their habitat and contribute to the overall objective of improving them so that they can eventually be removed from the threatened or endangered status lists.

Planned Management Actions

- Actively manage habitat locations listed in Table 12 (Map 12) to improve the habitat for unique, sensitive, and endangered plants and animals. In the remainder of the resource area, improve habitat of these species where opportunities exist through development of other resources.
- Protect the bald eagle concentration and falcon nest buffer areas by prohibiting activities during certain times of the year (Table 12, Map 12).
- Protect the black-footed ferret, spineless hedgehog cactus, and Uinta Basin hookless cactus sites by prohibiting surface disturbance year-round (Table 12, Map 12).

Rationale

Only some of the resident and migratory plants and animals of the Grand Junction Resource Area are amenable to being benefited by BLM actions. Table 3-9 of the draft RMP EIS estimates this susceptibility in several sensitive and all the listed threatened and endangered species. Those with a high rating are the best candidates for specific

benefiting actions in the habitat management plans. The Unaweep Seep and the Colorado River below the Loma bend are identified as areas where these vulnerable species are especially prominent and therefore will get the bigger share of the budget allocation. These species will also be considered in the other habitat management plans.

Table 12
Threatened and Endangered
Species Management Categories

Management Categories	Acres
Active habitat management:	
Unaweep Seep	55
Colorado River corridor	24,272
Pyramid Rock	470
Rough Canyon	1,470
Protective habitat management:	
Seasonal stipulations:	
Bald eagle concentration areas	26,105
Peregrine falcon nest (only includes active nest buffer area)	24,985
No surface disturbance (actual sites):	
Black-footed ferret	21,488
Spineless hedgehog cactus	51,452
Uinta Basin hookless cactus	131,503
Sensitive plant species	0 ¹

¹ Significant known sites will be protected from surface disturbance.

Placing protective buffers around raptor concentration areas and nest sites is the conventional method of protecting birds of prey from disturbing activities. The buffer width around nests is adjustable because topography and type of human activity involved varies from site to site. Also, the knowledge on a species' tolerance for intrusion is expected to improve.

Protecting black-footed ferret habitat and rare plants by restrictions upon ground-disturbing activities is the conventional method for these species. The uncertainty in the presence of black-footed ferrets and the sparse and scattered nature of many rare plants including the two officially listed cacti make it usually easy to avoid the individuals and imperative to survey within the potential range to determine how to avoid impacts.

Implementation of Planned Management Actions

The decision to actively manage threatened and endangered species habitat in the areas shown in Table 12 became effective upon signature of this plan. Habitat management plans outlining specific management will be written for these areas. In addition, a combined habitat management plan will be prepared for the Badger Wash Area of Critical Environmental Concern considering the

management of water resources and the sensitive plants *Cryptantha elata* and *Eriogonum contortum* and the plant association of special concern, Gardner's saltbush/salina wildrye. The Unaweep Seep Habitat Management Plan predates this plan and requires some revision.

The decision to protect the areas shown in Table 12 became effective upon signature of this plan. This decision will be implemented by comparing project proposals with areas identified for protective management. Seasonal or no surface disturbance stipulations will be placed on projects proposed within these areas.

Implementation Priorities

Priority 1

Protect the threatened and endangered species listed in Table 12.

Priority 2

Prepare habitat management plans in the following order: (1) Unaweep Seep Research Natural Area, (2) Colorado River corridor, (3) Badger Wash Area of Critical Environmental Concern, (4) Pyramid Rock Research Natural Area, and (5) Rough Canyon Research Natural Area. In the case of Unaweep Seep, the existing habitat management plan will be updated to ensure consistency with decisions in this plan.

Support

Request assistance from the Colorado Division of Wildlife, Colorado Department of Natural Resources, and the U.S. Fish and Wildlife Service in gathering baseline data, formulating objectives, designing projects, and monitoring in the preparation of habitat management plans. Also request forestry, recreation, lands and minerals support to administer the protective stipulations within their permit programs.

Livestock Management

Objective

To manage livestock grazing as described in the *Grand Junction Grazing Environmental Statement*.

Planned Management Actions

- Manage livestock grazing as described in the *Grand Junction Grazing Management Environmental Statement* using the new priorities and general management categories established through the allotment categorization process and this plan.
- Revise allotment management plans to resolve conflicts between grazing and this plan's proposed actions for soils, riparian, and water resources.

Rationale

In 1979, a grazing environmental statement was completed for the Grand Junction Resource Area. This environmental statement complied with the *National Environmental Policy Act* and court-ordered requirements (NRDC vs Morton) for preparation of site-specific analyses of grazing impacts on public land. The environmental statement analyzed the impacts of proposed grazing management and range improvement practices for all allotments in the resource area.

Subsequently, a range management program document was issued describing the range management program decided on as a result of the environmental statement and public input. In 1980, some 130 grazing decisions were issued which included an allotment management plan for each allotment. The grazing decision referred to above established active preference, suspended preference, total preference, number of livestock, kind of livestock, period of use, percent public land, and stocking rate by allotment. These decisions further identified objectives for each allotment. They also incorporated the allotment management plan as a condition of the grazing permit, identified the monitoring to be done, and stated that future changes in grazing would be based on land use plan decisions and the results of monitoring. This effort was completed in the summer of 1980.

Implementation of Planned Management Actions

The decision to manage livestock grazing as outlined in the grazing statement became effective upon signature of the grazing statement record of decision. The grazing statement decisions are presently being implemented through allotment management plans.

Allotment management plans will be reevaluated to ensure that allotment management plan objectives and practices are consistent with this plan's decisions and objectives for soil, riparian, and water resources. Where necessary, appropriate changes will then be made in allotment management plans and new grazing decisions or

agreements developed to institute the appropriate changes in grazing use.

Implementation Priorities

Allotment management plans have been implemented according to the priority established in the grazing statement. This priority has changed somewhat as a result of the categorization of allotments into *improve*, *maintain*, and *custodial* allotments (see Appendix E) and this plan. The revised priorities for implementation of allotment management plans are listed in Table 13. Priorities were established for the improve category only.

Support

Request continued support of engineering and operations to implement new allotment management plans. Request support from riparian specialist to identify riparian areas and incorporate riparian objectives into the allotment management plans.

Wild Horse Management

Objective

To maintain a viable wild horse herd and continue implementing the Little Book Cliffs Wild Horse Management Plan as modified by this plan.

Planned Management Actions

- Manage the Little Book Cliffs Wild Horse Range (30,261 acres) to accommodate a herd size of 65 to 120 wild horses.
- Expand the wild horse range by adding 2,380 acres of historically used critical winter range located on the face of the Book Cliffs (additional acres included in above).
- Identify the Little Book Cliffs Wild Horse Range as open to additional oil and gas leasing and as acceptable for further coal leasing consideration.
- Identify Coal Canyon as available for placement of mine mouth facilities pending further study to determine the impact on the wild horse herd.
- Prohibit disturbing activities in the Coal Canyon area from December 1 to July 1 to protect the wild horse wintering and foaling areas.

Table 13
Allotment Management Plan Priorities
(Intensive Allotment Management Plans Only)

Number	Name	Acres
6507	Little Salt	32,985
6723	Henderson Ridge Common	982
6738	Lower 4-A	2,258
6501	Big Salt	25,888
6705	Brush Mountain Common	2,278
6737	Lower Roan Creek Common	5,012
6502	Coal Gulch-Roan Creek	24,875
6744	Roan Creek	9,261
6714	Dougherty Gulch	3,117
6616	Prairie Canyon	25,645
6721	Head of Carr Creek	5,804
6726	Horse Mountain	678
6741	Middle Cow Ridge	1,088
6749	Walker	5,730
6751	West Cow Mountain	1,197
6753	West Spears	6,551
6716	East End Cow Mountain	583
6703	Brink Pedigo Gulch	4,937
6802	Bald Hill Common	800
6406	Blue Mesa	42,410
6409	Sinbad Valley	10,155
6407	Bull Hill-Maverick	14,354
6302	Wagon Park	31,385
6122	Clarks Bench	2,663
6119	Dead Horse	1,087
6120	Landini	2,430
6121	Notch Spring	3,037
6116	Bangs	23,623
6141	Burke	2,157
6142	Colorado River	8,018
6143	Radio Tower	905
6135	Little Dolores Bench	775
6136	Knowles	5,260
6137	Timber Ridge	2,120
6138	Black Ridge	4,615
6133	Reservation	2,744
6130	Colorado Ridge	11,853
6129	Snyder Flats	2,983
6126	28 Hole	1,615
6125	Lower Bench	16,022
6123	Upper Bench	5,478
6115	Spring Creek	5,547

Rationale

The Little Book Cliffs Wild Horse Range is one of three areas in the United States dedicated to wild horses. It was established in 1974 by a general management agreement between the permittees in the area and BLM. In 1980, it was dedicated to the memory of Velma B. (Wild Horse Annie) Johnson.

Implementation of Planned Management Actions

The wild horse management decisions became effective upon signature of this plan.

Prior to construction of mine mouth facilities, the operator will be required to submit a mining plan. The BLM will analyze the impacts of the facilities on the horses at that time, and mitigation measures will be developed to ensure a viable wild horse herd will continue.

The decision to prohibit disturbing activities in the wild horse range from December 1 to July 1 will be implemented by reviewing project proposals. Seasonal stipulations will be added to projects proposed in the wild horse range.

Implementation Priorities

Priority 1

Continue to implement the Little Book Cliffs Wild Horse Management Plan.

Support

Request support from the Divisions of Operations, Resources, and Minerals to continue project design, implementing and maintenance on the wild horse plan and to implement off-road vehicle designations.

Cultural Resource Management

Objective

To review and assess extant site data for values, protection and preservation needs.

To identify areas of significance for future inventory, designate high value areas for special management action based upon criteria outlined in the resource protection planning process reports and cultural resource management guide for the resource area.

Planned Management Actions

- Actively manage the sites identified in Table 14.

- Protect and preserve the remaining high value sites as prescribed by law and policy or as opportunities and situations arise.

Table 14
Cultural Resource Management Sites

Site	Acres
McDonald Creek	160
Indian Creek	350
Transect 7	9,100
Rough Canyon	100
Sinbad Valley	0
Cactus Park	1,000
Ladder Springs	640
Sieber Canyon	300
5ME1358	35
Total	11,685

Rationale

Many high value cultural resource sites are being destroyed by natural or human caused actions. Sites that have been identified for management possess National Register of Historic Places eligible qualities. Lasting public benefits will result from planned scientific inquiry and public education opportunities through protection and preservation of these high value cultural resources.

Implementation of Planned Management Actions

Cultural resource management decisions became effective upon signature of this plan. Further planning will be required prior to actively managing sites listed in Table 14. Cultural resources management plans that identify protective measures and other actions will be prepared for these sites. These plans will also describe research activities as directed by the resource protection planning process reports established by the State Historic Preservation Officer.

A comprehensive long-term commitment from the BLM to protect and preserve cultural resource values will be outlined in cultural resource management plans. High priority site areas for active management are listed in Table 14. Special designations, physical and administrative needs and measures, public interpretation or educational/scientific uses, data recovery and recordation needs, monitoring, and patrol schedules are the kinds of actions addressed in cultural resource management plans. In accordance with existing policy, inventory and evaluation of cultural resources will be done on all proposed projects. The resulting information,

along with existing cultural resources data, will become part of the BLM data base management system. This system is used for research, reports, and tracking purposes. Funding commitments and priorities will also be identified, and work schedules will be established.

Implementation Priorities

Priority 1

Consider cultural resource values for all projects as required by law and policy. Continue using projects to test and refine the Grand Junction Resource Area predictive model.

Priority 2

Prepare cultural resource management plans for the ten sites in Table 14 in the order shown. Actively manage these areas according to the cultural resource management plans.

Priority 3

Use automated data processing and data base management systems to prepare a Class I overview of the prehistory of the Grand Junction Resource area (which is required by the Colorado State Office and is a way to actively manage high value resources).

Priority 4

Manage the remaining 154 high value sites according to law and policy. Special management actions for these sites have been identified and will be considered after the management areas identified in the draft RMP EIS receive attention or special situations arise. Consider the following when setting priorities for these sites:

1. The capability of the site to yield information important to the prehistory or history of the nation, state, or local area.
2. The fragile or eroding condition of the site. Sites with fragile or exposed features may take priority over stable sites. Examples are rock art, wickiups, eagle traps, scaffolds, and sites with eroding features.

Support

Request support from engineering staff on special projects which may include survey, design, and site recordation assistance.

Request support from recreation specialist for recreation input in cultural resource management plans.

Recreation Resource Management

Objective

To ensure the continued availability of outdoor recreational opportunities which the public seeks and which are not readily available from other public or private entities.

To protect resources, meet legal requirements for visitor health and safety, and mitigate resource user conflicts.

Planned Management Actions

- Manage the Gateway (41,000 acres) and Grand Valley (176,000 acres) areas as intensive recreation management areas. Map 13 shows these areas. Protect high value recreation sites in the Gateway Intensive Recreation Management Area and sensitive areas in the Grand Valley. Also emphasize supervision of public use in the Grand Valley Intensive Recreation Management Area.
- Close the area along Little Park Road, the three off-road vehicle open areas in the Grand Valley, and the Mount Garfield area to shooting of firearms.
- Identify the Cactus Park and Rabbit Valley areas as group use areas (Map 13).
- Continue to manage the existing developed recreation sites (Miracle Rock, Dominguez, and Mud Springs) (Map 13). Expand the Mud Springs site to accommodate more group use.
- Provide public boating access to Ruby Canyon through acquisition of the Loma launch site or development of an alternative launch site, as determined through the Ruby Canyon Recreation Area Management Plan.
- Manage the Dolores, Gunnison, and Colorado River corridors to protect recreational opportunities in and along the rivers shown on Map 14. Require commercial floatboat operators to obtain river use permits.
- Adopt the recreation opportunity spectrum management classes shown on Map 14.
- Review project proposals to ensure compliance with this plan's river protection constraints on other land uses.

Rationale

All planned management actions address recreation related land use issues identified through the resource management planning process. Many similar public concerns were expressed for a wide variety of areas, resulting in the grouping of many issue areas into the large Gateway and Grand Valley Intensive Recreation Management areas to improve future planning efficiency. The issues in the Gateway area primarily involve resource protection, and the issues in the Grand Valley involve public use supervision and some resource protection. The no shooting zones are required to reduce public use conflicts involving incompatible recreational activities in several high use areas. The group use areas are identified as suitable for a variety of organized group use activities. These areas are relatively close to Grand Junction, have paved access, have large amounts of scenic open space, and can accommodate most types of group uses without adversely affecting other land uses. All of the developed recreation sites are needed to continue to provide public recreational service of this type. Mud Springs needs to be expanded because picnic use often exceed site capacity. Public access to Ruby Canyon needs to be assured at the Loma launch site or an alternate launch site to accommodate the heavy public demand for boating access. The Dolores, Colorado, and Gunnison River corridors all require recreational and land use restrictions to protect the unique, scenic, riverine recreation opportunities associated with these lands. Identification of recreation opportunity spectrum management objectives is necessary to set objectives for recreation management in important recreation settings and to use as a guide in analysis of other land use proposals.

Implementation of Planned Management Actions

The recreation decisions became effective upon signature of this plan. River management of the Dolores, Gunnison, and Colorado Rivers; the Gateway and Grand Valley Intensive Recreation Management Areas; the Rough Canyon Area of Critical Environmental Concern; The Palisade Outstanding Natural Area; and the two group use areas require additional planning. Recreation management plans will be prepared for these areas. In the Grand Valley area, the primary issues to be addressed are the need for public use supervision and the protection of recreation setting in several sensitive areas. In the Gateway area, the primary issues to be addressed involve protection of high value recreation settings.

The recreation opportunity spectrum class, no shooting zone, and protective river management decisions require no additional planning. Implementation actions became effective upon signature of this plan.

The decision to review project proposals required no additional planning. Future project proposals will be reviewed as they are received to determine whether they

conflict with recreation management decisions. Conflicting proposals will be modified, relocated, or denied to meet recreation management objectives.

Implementation Priorities

Priority 1

Prepare recreation management plans in the following order:

1. Ruby Canyon
2. Grand Valley
3. Gateway
4. The Palisade Outstanding Natural Area
5. Rough Canyon Area of Critical Environmental Concern

Support

Request a BLM ranger position and citation authority to supervise public use and enforce public use constraints made in this plan.

Visual Resource Management

Objective

To protect the quality of the scenic values on public land where visual resource management is an issue or where high value visual resources exist, and to protect areas having high scenic quality, visual sensitivity, and public visibility.

Planned Management Actions

- Adopt the visual resource management classes as listed in Table 15 and shown on Map 15. Modify, relocate, mitigate, or deny proposed projects that conflict with the objectives of these classes.

Rationale

The visual resource management Class I areas are primarily within wilderness study areas where maintenance of a pristine landscape is a dominant management objective. Outside of the wilderness study areas, the cliffs of Sinbad Valley, The Palisade, and Mount Garfield are all highly scenic landscape features that deserve special management attention to ensure continued protection.

Table 15
Visual Resources Management Classes

Visual Resource Management Classes	Acres
Class I	
Areas recommended for wilderness designation	166,340
Mount Garfield	1,280
Cliffs of Sinbad Valley	1,920
The Palisade	1,920
Class II	106,520
Class III	180,481
Undesignated	838,499

The visual resource management Class II areas consist of scenic landscapes where protection of visual resources is a major management concern. The Colorado, Gunnison, and Dolores River corridors provide a scenic, natural setting for river-oriented recreational activities. Protection of the Highway 141 corridor is important to maintain scenic values important to sightseeing and tourism. The Granite Creek and Bang's Canyon area canyons are scenic desert canyons important for hiking and other public recreational uses. The protection of scenic values around Vega Reservoir is needed to protect the landscape associated with the Vega State Recreation Area. Protection of the scenic cliffs in the Hunter/Garvey Canyon area is needed to protect this area of relatively unmodified Book Cliffs landscape.

The visual resource management Class III areas are all scenic landscapes and highway corridors where a noticeable degree of landscape change is anticipated from land use activities but where visual change will be reduced through reasonable constraints in project design and mitigation.

Implementation of Planned Management Actions

Visual resource management classes became effective upon signature of this plan. No further planning will be required to implement the decisions. Project proposals will be reviewed for consistency with visual resource management classes. Projects that would noticeably change the characteristic landscape will be modified to blend in with the characteristic landscape, will be denied, or will be moved to another more suitable location.

Implementation Priorities

Priority 1

Review and analyze proposed projects to determine whether they conflict with objectives of visual resource management designations.

Support

None.

Off-Road Vehicle Management

Objective

To designate all public land for off-road vehicle use and use restrictions by September 30, 1987.

Planned Management Actions

- Assign off-road vehicle designations to all public land as listed in Table 16 and shown on Map 16.
- Review project proposals to determine conflicts with off-road vehicle designations.

Table 16
Off-Road Vehicle Designations

Off-Road Vehicle Designations	Acres
Closed	159,627
Limited to designated roads	88,669
Limited to existing roads and trails	366,812
Seasonal limitations	63,242
Seasonal limitations (harsh winters only)	121,600
Open	480,110
Intensive/competitive use areas (three areas) ¹	(11,240)

¹ Acres identified for intensive/competitive use are included in the open category.

Rationale

Proposed wilderness areas were designated closed to protect wilderness values. Mount Garfield, The Palisade (1,920 acres), and the Sinbad Valley cliffs were designated closed to protect outstanding scenic values; the Palisade municipal watershed, to protect this domestic water supply watershed; Badger Wash, as part of a watershed study; one area is closed to protect a sensitive plant study site; the Fruita Paleontological Site, to protect scientific paleontological values; one archaeological site, to protect cultural values; and Unaweep Seep, to protect the habitat of a rare butterfly.

One area was designated limited to designated roads to protect a sensitive plant species; South Shale Ridge, to protect scenic values; soil slump areas, to minimize surface movement; one area, to protect scientific paleontological values; the Little Book Cliffs Wild Horse Range, to protect wild horse habitat and reduce harassment of horses; and a portion of The Palisade Outstanding Natural Area (17,258 acres) to protect natural and scenic values.

Seasonal limitations were placed primarily on big game winter range areas: the Beehive, Land's End, Little Book Cliffs Wild Horse Range, Chalk Mountain, Sunnyside, Blue Mesa, Demaree Canyon, Coal Gulch, and Big Salt Wash. Widespread provisions also were made for temporary closures to protect big game winter range during unusually harsh winters. In addition, the Dominguez Campground road was designated seasonally closed to protect the road from early spring vehicle damage.

Much of the resource area was designated limited to existing roads to stop indiscriminate cross-country vehicle travel that typically damages range values, wildlife habitat, scenic values, cultural values, forestry values, recreational opportunities for other users, sensitive plant and animal habitat, soils, and watershed values.

The land designated open to unrestricted vehicle use, including cross-country travel, was left open because vehicle use does not conflict significantly with other uses on this land. The exceptions are the three areas in the Grand Valley designated as intensive/competitive use areas and the land identified for disposal. The three areas in the Grand Valley were designated open for competitive/intensive off-road vehicle use because they are important ORV use areas — they offer a large amount of space, which is needed by off-road vehicles, and they are near urban areas. The disposal tracts were left open because a decision was made to expend few public funds on managing resources on these tracts.

Implementation of Planned Management Actions

Off-road vehicle designations became effective upon signature of this plan. Additional planning will be required to implement off-road vehicle designations. An off-road vehicle management plan will be prepared outlining signing locations and other more specific management. Off-road vehicle designations will be published in the *Federal Register* and local newspapers. Signs will be placed in some areas. A map showing designations will be printed and made available for public sale. The off-road vehicle designation map will be the primary means of implementing off-road vehicle designations.

Project proposals will be reviewed to identify conflicts with off-road vehicle designations. Proposals that conflict with designations will be modified or denied.

Implementation Priorities

Priority 1

Implement off-road vehicle designations by the end of fiscal year 1987 (September 30, 1987). The off-road vehicle designation implementation plan, *Federal Register* notice, and designation map will include the entire resource area.

Support

Request support from Colorado State Office cartography to prepare the off-road vehicle designations map. Request funds from other resources, particularly soils, water, and wildlife to help pay for map, signs, and sign maintenance budget.

Request a ranger position and citation authority to implement and enforce off-road vehicle designations.

Wilderness Management

Objective

To determine the suitability or unsuitability of seven wilderness study areas (WSAs) for wilderness designation.

Planned Management Actions

- Recommend most of the Sewemup Mesa and Dominguez Canyon WSAs as preliminarily suitable for wilderness designation (Table 17).
- Combine Black Ridge Canyons and Black Ridge Canyons West WSAs into one unit called Black Ridge Canyons and recommend most of the acreage within these WSAs as preliminarily suitable (Table 17) for wilderness designation.
- Recommend all of Demaree Canyon, Little Book Cliffs, and The Palisade WSAs and parts of Sewemup Mesa, Dominguez Canyon, Black Ridge Canyons and Black Ridge Canyons West WSAs as preliminarily unsuitable (Table 17).
- Manage all seven WSAs under BLM's *Interim Management Policy* pending congressional action on wilderness recommendations. Review projects proposed within these WSAs to determine whether they would impair the suitability of such areas for wilderness designation.

- Following congressional action, manage the areas designated wilderness as directed by the 1964 Wilderness Act and the Bureau of Land Management's Wilderness Management Policy and manage those designated nonwilderness as described in other sections of this document.

Table 17
Preliminary Recommendations
for Wilderness Designations

Wilderness Study Areas	Preliminary Recommendations	
	Suitable	Nonsuitable
Demaree Canyon	0	21,050
Little Book Cliffs	0	26,525
Black Ridge Canyons ¹	73,937	1,263
The Palisade	0	26,050
Dominguez Canyon ²	73,568	2,232
Sewemup Mesa ²	18,835	305
Total	166,340	77,425

¹ The recommendation to the Secretary of the Interior will be to combine Black Ridge Canyons and Black Ridge Canyons West WSAs to form one wilderness area. Includes acreage in Moab District, Utah, and 2,760 acres outside the WSA which would enhance management.

² Includes acreage in the Montrose District, Colorado.

Rationale

Suitable

The Black Ridge Canyons WSA (19,595 acres), Black Ridge Canyons West WSA (54,342 acres), Dominguez Canyon WSA (73,568 acres), and Sewemup Mesa WSA (18,835 acres) are recommended preliminarily suitable for wilderness designation because they possess outstanding wilderness characteristics including sufficient size, naturalness and outstanding opportunities for both solitude and primitive and unconfined recreation. Additionally, each of these WSAs possess high quality ecological, geological, scientific, educational, scenic and cultural values. These WSAs will be outstanding representatives of the Colorado Plateau Physiographic Province in adding to the landform and ecological diversity of the National Wilderness Preservation System. All areas have minimal resource conflicts. Very strong public support, from both the region and nation, has been shown for wilderness designation of these WSAs. Specific boundaries for each WSA are shown in Appendix I of the draft RMP EIS.

Nonsuitable

The reasons all of the Demaree Canyon, Little Book Cliffs and The Palisade WSAs were determined to be nonsuitable for wilderness and small boundary areas of the Black Ridge Canyons, Black Ridge Canyons West, Dominguez Canyon, and Sewemup Mesa were also found to be nonsuitable follow:

The primary reason for the nonsuitability recommendations in the Demaree Canyon and Little Book Cliffs WSAs is potential loss of high mineral values. These WSAs contain known geologic structures, are considered prospectively valuable for oil and gas, have high development potential for oil and gas, and contain known coal deposits. BLM estimates that the Demaree Canyon WSA contains 125.3 million short tons of coal and 21,050 acres of high potential oil and gas lands. The Little Book Cliffs WSA contains 349 million short tons of and 26,525 acres of high potential oil and gas lands. Nondevelopment of these coal and oil/gas reserves would be a significant loss of rental income, royalty revenues and a foregoing of potential reserves.

The Palisade WSA was considered nonsuitable for wilderness based on marginal manageability — primarily trespass related to recreational use, a general lack of public support in the Gateway area for wilderness, and conflicts with long-time established uses in parts of the WSA. This WSA has very limited legal access along its southeastern side (along Colorado Highway 141) and none from its northern side, except in the northwest corner. There is no legal access into the North Fork of West Creek or Fish Creek. Both are popular areas that provide physical access to the north rim. It is impossible to hike the north rim, a major recreation attraction of the WSA, without trespassing over the majority of its 12-mile distance. The primary legal access is along the unit's western boundary. The unit's configuration and steep topography limit recreationists' movement within the area and create trespass problems.

In the Black Ridge Canyons WSA, 590 acres were recommended nonsuitable to provide for a small (one-quarter mile wide) utility corridor along the eastern boundary, a four mile long access road to within one mile of the arches in Rattlesnake Canyon, and a 2 mile long boundary relocation along the Colorado River to exclude motorized river use.

In the Black Ridge Canyons West WSA, 673 acres were found to be nonsuitable along the Colorado River boundary to exclude motorized river use. Another 480 acres were determined to be nonsuitable for wilderness in the northwest part of the Utah portion of this unit. This includes 320 acres of split estate lands (federal surface, state minerals) that are on the extreme edge of the 73,937-acre unit, are not an integral part of any Black Ridge Canyon system, do not add significantly to the unit, and are not considered manageable for wilderness. The benefits gained by obtaining the state-owned minerals are not considered justifiable. The 480 acres also includes an adjacent 160-acre "finger-like"

parcel found nonsuitable to improve wilderness manageability by better defining the northwest boundary of the unit.

The 2,232 nonsuitable acres in the Dominguez Canyon WSA include 1,192 acres above the unit's western canyons rims, 1,000 acres in the Open Draw/Palmer Gulch area, and 40 acres for other minor boundary adjustments. The 1,192 acres above the unit's western rim were recommended nonsuitable to improve manageability by reducing vehicle and firewood trespass from the adjacent roads and chainings. These boundary adjustments also helped to minimize forest management conflicts. The 1,000 acres in the Open Draw/Palmer Gulch area were recommended as nonsuitable to create a more definitive topographic boundary (which minimizes potential vehicle conflicts), to remove imprints of man, and to provide for future access. The other 40 acres were recommended nonsuitable to make the unit easier to manage.

The 305 acres determined to be nonsuitable in the Sewemup Mesa WSA resulted from minor boundary changes on all sides of the WSA. These boundary changes were done to improve manageability and eliminate resource conflicts. The boundary on the south shore of Salt Creek (on the northern boundary of the WSA) was moved 200 feet north to prevent conflicts with the Sinbad Valley Salinity Control Project. The eastern boundary was moved 400 feet to eliminate conflicts with future utility rights-of-way and oil and gas drilling in the Dolores River Canyon. The western and southern boundaries were modified to make it easier for visitors to recognize in the field.

Implementation of Planned Management Actions

Section 603 of the *Federal Land Policy and Management Act* of 1976 directs the Secretary of the Interior to review areas of 5,000 acres or more of the public land determined to have wilderness characteristics and to report to the President his recommendations as to the suitability of each area for preservation as wilderness. The Secretary is required to report his recommendations to the President by October 21, 1991, and the President is required to report his recommendations to Congress by October 21, 1993. Congress ultimately decides whether to designate areas as wilderness.

The decision to recommend the WSAs as suitable or nonsuitable became effective upon signature of this plan. Wilderness recommendations could change during administrative review and, therefore, are considered preliminary at this time. Additional planning and environmental analysis will be necessary before they are designated suitable or nonsuitable by Congress and the President.

Following the completion of the resource management plan, a wilderness study report identifying the wilderness suitability or nonsuitability recommendations for each WSA will be prepared and submitted to Congress. The wilderness

study report will be accompanied by a separate final environmental impact statement on the wilderness portion of this plan.

Only Congress has the authority to add areas to the National Wilderness Preservation System. After wilderness designation, a wilderness management plan will be written for each area designated. Fire management plans will also be developed for these areas. Areas designated as wilderness will be managed under the provisions of the Wilderness Act to preserve wilderness character and provide for the public purposes of recreational, scenic, scientific, educational, conservation, and historical use. Areas designated nonsuitable will be released from wilderness review and managed for other uses.

Until Congress makes its decision on whether or not to designate an area as wilderness, BLM's *Interim Management Policy* will be followed, and the WSA's will be patrolled periodically to detect and prevent unauthorized actions which could impair the suitability of such areas for preservation as wilderness. Following congressional action, a wilderness management plan will be prepared for any area designated as wilderness. A monitoring plan will be included in the wilderness management plan.

Implementation Priorities

Priority 1

Prepare a wilderness study report for seven WSAs, and prepare a preliminary final wilderness environmental impact statement for submission to Congress.

Support

Request mineral surveys from the U.S. Geological survey and the U.S. Bureau of Mines for WSAs recommended as preliminarily suitable for wilderness designation. Request cadastral survey support to define some wilderness boundaries. Request support from the Operations staff for easements and land acquisition.

Special Management Areas

Objective

To identify and protect those areas within the Grand Junction Resource Area that require some special management and that meet the criteria for area of critical environmental concern (ACEC) designation.

Planned Management Actions

- Designate the areas listed in Table 18 as areas of critical environmental concern, and as either research natural areas (RNAs) or outstanding natural areas (ONAs)(Map 17).
- Manage each special area to protect the critical resources or processes (Table 18) that lead to the designation. The emphasis area narratives in this plan contain site-specific management actions for each area to be designated.

Rationale

Each area meets the criteria for ACEC, RNA or ONA designation. The primary reason each site was selected for special management is shown in Table 18 (critical resource).

Implementation of Planned Management Actions

The ACEC, RNA, and ONA designations became effective upon approval of this plan. A notice will be published in the *Federal Register*.

Activity plans will be prepared to guide protection and management of important resources located at each of the sites to be designated. The activity plans will be prepared by the resource specialist proposing the designation. Existing activity plans will be reviewed and modified if necessary to ensure consistency with this plan. Each site will then be managed according to the activity plans.

Implementation Priorities

Priority 1

Prepare a *Federal Register* notice.

Priority 2

Prepare new or review existing activity plans for each designated site, as necessary.

Support

Request assistance from resource specialists to prepare or review activity plans. Request support from Division of Operations to construct and maintain facilities.

Table 18
Special Management Areas Designations

Area	Type of Designation	Critical Resource	Acres
Fruita Paleontological Site	RNA and ACEC	geologic processes	280
Rabbit Valley Paleontological Site	RNA and ACEC	geologic processes	280
Unaweep Seep	RNA and ACEC	sensitive butterflies	37
Badger Wash	ACEC	sensitive plants and hydrologic research	1,520
Pyramid Rock	RNA and ACEC	endangered plants	470
Rough Canyon	RNA and ACEC	endangered plants, scenic values, and cultural resources	1,470
Gunnison Gravels	RNA and ACEC	geologic processes	5
The Palisade	ACEC and ONA	scenic values	19,178

Land Tenure Adjustments

Objective

To adjust public land patterns to consolidate public land for improved management efficiency and to acquire suitable private land with special resource values.

Planned Management Actions

- Place 140 tracts totaling 24,998 acres in a disposal category (Map 20). Consider these tracts for exchange as a primary means of disposal and for sale as a secondary means of disposal.
- Place 8 tracts of private land totaling 1,889 acres in an acquisition category. In addition to these tracts, consider acquisition of other private land offered in exchange for public land using the acquisition criteria.
- Acquire private land through exchange whenever possible rather than through purchase by BLM.
- Place 14 tracts totaling 1,360 acres (Map 20) in a cooperative management agreement category. Offer these tracts to qualified agencies or interest groups for management or exchange. Retain any tracts not exchanged or managed cooperatively, but generally expend no public funds for their management.
- Place the remaining public land in a retention category.
- Consider proposals to exchange private land for public land in areas identified as retention if exchange would (1) improve management efficiency or (2) result in the acquisition of private property with high resource values.
- Consider for disposal small, isolated tracts of public land not presently shown on the base map that become known in the future and otherwise meet the disposal criteria.
- Consider applications to meet community or organization needs under the *Recreation and Public Purposes Act* in retention areas.
- Consider for exchange only private land that meets the acquisition criteria. This land lies within or adjacent to large blocks of public land or has special resource values needed by BLM to improve resource management.
- Convey the mineral estate with the surface of public land disposal tracts if mineral values are not known to exist or if retaining the mineral rights will interfere with or preclude nonmineral development of the land which is a more beneficial use of the land than mineral development (Federal Land Policy and Manage-

ment Act Section 209) or where conveyance of the mineral estate is determined to be appropriate for an exchange proposal under Section 206 of the *Federal Land Policy and Management Act*.

Acquisition Criteria

Following are the types of private land that will be considered for acquisition through exchange:

1. Private land within areas recommended as suitable for designation as wilderness.
2. Private land needed for management of wild and scenic rivers and wild and scenic study rivers.
3. Potential national or historic trails.
4. Potential natural or research natural areas.
5. Potential areas for cultural or natural history designation.
6. Potential areas of critical environmental concern.
7. Private land within designated wild horse preserves.
8. Private land with potential for other congressional designations.
9. Threatened or endangered species habitat areas.
10. Riparian habitat areas.
11. Valuable recreation areas.
12. Wetland areas as defined in *Executive Order 11990*, dated May 24, 1977.
13. Flood plain areas (100-year) as defined in *Executive Order 11988*, dated May 24, 1977.

Rationale

Consolidation of public land patterns into more manageable blocks would improve management efficiency. Preliminary review of available data for the disposal tracts has shown that they generally contain insignificant resource values. Acquisition of private land with special resource values would benefit resource management.

Implementation of Planned Management Actions

Land tenure adjustment categories became effective upon signature of this plan. However, actual land tenure adjustments will not be made until an activity plan is prepared. The activity plan will outline such things as general sequence of disposal and recommended disposal methods. Environmental assessments and land reports will be prepared for all disposals.

All proposals for exchange will be reviewed to determine whether the private land meets the acquisition criteria. Proposals that do not meet any of the acquisition criteria will be denied. Some disposal tracts may be included in a statewide exchange pool.

Implementation Priorities

Priority 1

Prepare a land tenure adjustment activity plan to guide land disposals and acquisitions. Process land exchanges and/or sales as directed in the land tenure adjustment activity plan.

Priority 2

Initiate cooperative management agreements with qualified agencies or groups interested in the cooperative management agreement tracts.

Support

Request support from BLM resource specialists for preparing appraisal and mineral reports and for obtaining cultural, threatened and endangered species, and paleontological clearances. Request support from BLM engineers to conduct cadastral surveys on some tracts.

Transportation Management

Objective

To provide access to public land by acquiring those legal rights on nonpublic land that are essential to implement BLM planned actions.

Planned Management Actions

- Acquire public or administrative access into 37 areas of public land where legal access does not exist (Map 20). Use and improve existing roads and trails in these areas where feasible. Construct new roads and trails where none exist or where existing roads and trails are inadequate for BLM needs. Comply with road construction standards and designs listed in BLM Manual 9113.

- In the remainder of the resource area, consider requests from resource specialists for additional acquisition as needs arise.

Rationale

The 37 areas were identified by resource specialists who need access to implement the planned management actions identified in this plan. These areas are currently inaccessible to the public and BLM for several reasons: some areas are constrained by topography and poor road conditions; others are surrounded by private land whose owners charge for crossing their land. Table 19 lists the areas where legal access is needed. It also gives the reasons for the needed access (benefiting resource).

The decision to consider requests for additional acquisition needs in the remainder of the resource area was made to allow for unforeseen circumstances that could not be planned for. For example, the county government could vacate a county road that provides the only access to an area.

Implementation of Planned Management Actions

A resource area wide transportation plan, site-specific route analysis and an environmental assessment for each easement proposal will be prepared. These analyses will recommend the best approach for acquiring the easement and specific routes. The transportation plan will be closely coordinated with off-road vehicle designations and with local, state, and federal agencies. The transportation plan will identify specific roads or types of roads to be closed and rehabilitated. It will also identify those roads that are to remain open for proper management of the resource area.

Some of the twelve access locations in the De Beque/Book Cliffs area will be analyzed for acquisition after the preparation of an activity plan. Property owners and local, county and state agencies will be asked to attend a workshop to address positive and negative aspects of acquiring each easement. BLM managers will then select the most appropriate route(s) based on the transportation plan, route analysis, BLM needs and public input.

Table 19
Areas Identified for Legal Access

Area	Type of Access ¹	Benefiting Resource ²	Access No. ³
McDonald Creek	PR	C,Rec	20
Carpenter	PT	WH,Rec	2
Adobe	PT	WH	1
Little Dominguez	PT	WN	12
Indian Creek	PR	Rec,Rg,WL	17
Cactus Park	PR	F,WL,Rg,Rec	36
29 Road	PR	Rec	18
33 Road	PR	Rec	19
Mitchell Road	PR	Rec,O	37
Pollack	PT	Rec	11
Douglas Pass East	PR	Rec,WL,F,Rg	4
Corcoran Wash	PR	Rec,F,Rg	7
Prairie Canyon	PR	F,Rec,Rg	8
Buniger Road	PR	Rec,F,WL,Rg	5
Baxter-Douglas	AR	Rec,WL,F,Rg,O	10
Hopple Gulch	AR	Rec,WL,F	27
Tater Hills	AR	Rec,WL,F	28
Crawford Peak	AR	(Comm. site)	29
Timber Ridge	PR	F,Rec	31
Sinbad-Sewemup	PR	Rec,WN	15
Snyder Flats North	AR	F	35
Coates Creek	AR	F	30
Snyder Flats South	AR	F	33
Devil's Canyon	PT	Rec,WN	14
Flume Canyon	PT	Rec,WN	13
Brush Mountain*	PR	Rec,WL,F,Rg	23
Barrel Springs*	PR	Rec,WL,F	9
Cow Ridge*	PR	Rec,F,WL,Rg	24
4-A Mountain*	PR	Rec,F,Rg	22
Horse Mountain*	PR	Rec,F,Rg	26
Middle North Dry Fork*	PR	Rec,F,WL,Rg	25
Hunter Canyon	PT	Rec	3
Carr Creek*	PR	Rec,WL,F,Rg	21
South Canyon*	PR	Rec,F,Rg	6
Black Ridge	PT	Rec,WL	16
Bull Draw	PT	Rec	34
Unawep to Little Park	PR	Rec,F,Rg	32

¹ AR = Administrative road; PT = public trail; PR = public road

² WH = wild horses; C = cultural; REC = recreation; O = oil and gas; WN = wilderness; F = forestry; WL = wildlife; Rg = Range

³ Corresponds to location shown on Map 20

* Requires workshop on route analysis to select most appropriate routes. Priorities have not been determined. Priorities for these areas will be determined in the transportation plan.

Implementation Priorities

Priority 1

Acquire access in the order shown in Table 19. Modify the order if necessary based on access needs to implement activity plans, acquisition opportunities, and available funding.

Priority 2

Acquire access in the remainder of the resource area as acquisition needs arise.

Support

Request support from engineering for cadastral surveys to determine boundaries and identify corners. Request support from appropriate resource specialists to plot easements, conduct appraisals, and identify acquisition costs. Request Colorado State Office cartographic support for preparing plats. Request support from the Department of the Interior solicitors and from the U.S. Attorney for title and acquisition problems.

Public Utilities Management

Objective

To respond, in a timely manner, to requests for utility authorizations on public land while considering environmental, social, economic, and interagency concerns.

Planned Management Actions

- Designate 234,113 acres (Map 18) as unsuitable for public utilities (Table 20). Deny proposals in these zones on the basis that utility project impacts could not be mitigated to prevent undue damage to the resources of concern.
- Designate 606,456 acres (Map 18) as sensitive to public utility development (Table 20). Design utility routes and projects in these zones so as to protect resources of concern from undue damage.
- Designate the remaining public land (Map 18) as suitable for consideration for public utilities. Consider proposals in these zones.
- Encourage use of existing corridors or upgrading of existing facilities in sensitive and suitable zones.

Table 20
Public Utility Designations

Areas of Resource Concern	Acres	
	Unsuitable ¹	Sensitive ²
SOILS MANAGEMENT		
Douglas/Baxter Soil Slumps	18,000	
Plateau Creek Slump	860	
Steep Slopes		200,000
WATER RESOURCES MANAGEMENT		
Badger Wash Study Area	(685)	
Palisade Municipal Watershed		4,640
Grand Junction Municipal Watershed	1,240	
Jerry Creek Reservoirs		1,160
Perennial Streams		6,145
Indian Wash Dam	10	
GEOLOGY/PALEONTOLOGY		
Fruita Paleontological Site	280	
Rabbit Valley Paleontological Site	280	
Gunnison Gravels	5	
Black Ridge Angiosperm	(40)	
WILDLIFE		
Deer and Elk Winter Range		238,820
Bighorn Sheep Winter Range		6,200
Elk Calving Areas		7,139
Skipper's Island	160	
Rough Canyon	(1,470)	
THREATENED AND ENDANGERED SPECIES		
Bald Eagle Concentrations Areas	37,305	
Peregrine Falcon Habitat		30,875
Black-Footed Ferret		21,488
Spineless Hedgehog Cactus		59,052
Uinta Basin Hookless Cactus		131,503
Sensitive Plant Species		73,600
Cryptantha elata Site		3,700
Badger Wash Uplands		1,230
Pyramid Rock	470	
Unaweep Seep	440	
Colorado Cutthroat Trout		100
WILD HORSE MANAGEMENT		
Wild Horse Range		30,261
Wild Horse Winter Range		(6,500)
Wild Horse Foaling Area		(6,500)
VISUAL RESOURCES MANAGEMENT		
Juanita Arch	40	
The Goblins	80	
Face of the Book Cliffs		(13,000)
Ruby Canyon	8,000	
Dolores River Canyon	17,000	
Gunnison River Corridor	8,960	9,040
South Shale Ridge		22,500
Mount Garfield Cliffs	9,520	
Grand Mesa Slopes		9,600
Bang's Canyon Area	14,080	25,920

Areas of Resource Concern	Acres	
	Unsuitable ¹	Sensitive ²
Sinbad Valley	1,920	7,490
Granite Creek	2,240	12,760
Unawee Canyon Area	14,080	6,400
Hunter/Garvey Canyons Area	7,600	11,400
Vega Reservoir Viewshed	120	
Highway Corridors		34,220
Black Ridge Corridor	860	
CULTURAL RESOURCES MANAGEMENT		
Indian Creek	350	
Rough Canyon	(1,000)	
Cactus Park	1,000	
Sieber Canyon	300	
McDonald Creek	160	
5ME1358	35	
Ladder Springs	640	
Transect 7		9,000
RECREATION RESOURCE MANAGEMENT		
Rough Canyon ACEC	(2,560)	
Dominguez Canyon	19,178	
The Palisade ONA	1,920	17,258
Developed Recreation Sites	160	
Island Acres	80	
Vega Reservoir	2,160	
Highline Reservoir	1,100	
Bridgeport Trailhead		640
Ruby Canyon Overlook	(80)	
Little Park Road		7,700
Pine Mountain Roadside		320
WILDERNESS MANAGEMENT		
Black Ridge Canyons	49,622	
Sewemup Mesa	17,775	
Dominguez Canyon	30,798	
LAND TENURE ADJUSTMENT		
Disposal Tracts		24,998
Gross Total	208,315	1,036,066
Estimated Sensitive Restriction		
Overlap	-5,000	-412,120
Total	203,315	623,946

Note: () indicates overlap with another area.

¹ Unsuitable areas contain resources of concern that would be damaged by public utility projects.

² Sensitive areas contain resources of concern that could probably be protected from undue damage with adequate mitigation and proper project design.

- Designate eight corridors shown on Map 19 and listed in Table 21 as public utility corridors. Encourage utility companies to use these corridors. Deny three of the five proposed utility corridors identified in the Western Regional Corridor Study.
- Designate three additional corridors upon issuance of rights-of-way grants for several pending utility project proposals: Clear Creek Oil Shale Project, Mobil and Pacific Oil Shale Projects, and the Grand Valley Conversion Project through Coal Canyon.

Rationale

Table 20 lists the reasons (resources of concern) for the sensitive and unsuitable designations.

The eight corridors were designated to help direct routing of proposed utility projects along the routes of existing projects. The eight corridors are consistent with the Piceance Basin Resource Management Plan, the Grand Mesa Forest Plan, and the Grand Resource Area (Utah) Resource Management Plan.

Table 21
Public Utilities Corridors

Location	Type of Utility	Approximate Corridor Width
Unaweep Canyon	Telephone and small electrical lines	One-half mile
Between Colorado National Monument and Black Ridge WSA	Small water, telephone, and electrical lines	One-quarter mile
Along MAPCO pipeline in West Salt Creek	Major pipelines and power lines	One-half mile
Along Northwest Pipeline and State Highway 139	Major pipelines and power lines	One-half mile
Coal Canyon	Major power lines	One-half mile
From De Beque to southern boundary of resource area	Major power lines	Four miles
Along Roan Creek from De Beque to the Community Center	Railroads; power lines; major water and oil and gas pipelines	One mile
Along Clear Creek from Community Center to northern resource area boundary	Major power lines and pipelines	One-half mile

Three of the five utility corridor proposals in the *Western Regional Corridor Study* were denied because of the small amount of public surface ownership involved and conflicts with proposed wilderness. The remaining two corridor proposals were consistent with management emphasis and were designated as corridors.

Implementation of Planned Management Actions

Suitability and corridor designations became effective upon signature of this plan. Locations of applications for land use authorizations will be compared with suitability designations. Applications in suitable and sensitive zones will be considered if projects can be designed to protect resources of concern (Table 20). Applicants will be encouraged to seek alternate locations, when available, to mitigate impacts within sensitive zones. Applications in unsuitable zones will be denied except where valid existing rights require granting of authorization. All approved authorizations will include stipulations in the project design to mitigate impacts associated with their authorization and development.

Implementation Priorities

Priority 1

Compare project proposals with zones and corridors to determine suitability of project locations.

Support

Request support from engineers and surface reclamation specialists for designing and mitigating project proposals. Request support from appraisers for right-of-way rental determinations.

Fire Management

Objective

To minimize cost and loss, complement resource management objectives, and sustain the productivity of the biological ecosystems through fire management.

Planned Management Actions

- Assign one of five fire response levels to all public land in the resource area — critical, full, limited, wilderness, and prescribed.
- Map the assigned levels (delineate the areas) in a fire management plan following publication of this plan.
- Assign levels to areas based upon protection of resource values present, and manage or suppress fires as prescribed by the assigned levels (Table 22). Use the criteria in Table 23 in assigning fire response levels to areas.

Rationale

Public lands were placed in one of these categories in order to protect identified values and be compatible with resource objectives in the most cost efficient manner.

Table 22
Fire Response Levels

Response Level	General Management Prescription
Critical	Take immediate, aggressive action to contain and control all fires. Commit human and equipment resources at an increasing rate until the objective of fully protecting the threatened area is met.
Full	Take aggressive action by forces sufficient to contain the fire by 10 a.m. on the day following ignition. If a fire escapes containment during this period, continue suppression action in order to minimize total resource losses, suppression and rehabilitation costs, and environmental damage.
Limited	Take less than full suppression actions in areas where hazards to firefighters and suppression costs are high and where fire results in positive or neutral effects on resource values. As a minimum response, monitor limited suppression area fires. Establish response levels following an analysis of fire's effects on the values-at-risk.
Wilderness	Restrain fire suppression methods in any areas designated as wilderness areas. Manage fires in ways that will cause the least degradation to wilderness values. Consider managing as limited suppression areas. Determine response levels by using value-at-risk and cost-benefit ratio analysis.
Prescribed	Intentionally ignite fires in order to meet land and resource management objectives. Manage all wildfires in prescribed burning areas according to one of the categories.

Table 23
Criteria for Response Level Assignments

Response Level	Types of Values Present	Fire's Effects on Resource Values
Critical	Developed recreation sites, sites, areas of BLM/urban interface, important watersheds, and valuable threatened and endangered wildlife habitat.	Would be adversely impacted by fire.
Full	Range and habitat, range improvements, commercial stands of timber and areas of high erosion potential.	Could be adversely impacted by fire.
Limited	Range and habitat, visual resources, water quality and air quality.	Could be adversely or positively impacted by fire.
Wilderness	The natural vegetative mosaic of the wilderness.	Could be positively affected by fire.
Prescribed	Forage and browse production, increased edge, improved access and better visual mosaic.	Could be positively affected by proper application of fire.

Implementation of Planned Management Actions

The decision to assign fire response levels to public land became effective upon signature of this plan. The response areas will be delineated following publication of this plan and presented in a fire management plan. The fire management plan will prescribe more specific management for the response areas.

Implementation Priorities

Priority 1

Develop fire management plan using input from resource specialists.

Priority 2

Manage fires in accordance with the fire management plan.

Priority 3

Review and amend fire management plan to correct any observed deficiencies.

Support

Request support from the U.S. Forest Service, Mesa and Garfield County Sheriff Offices, Western Slope Fire Operations, Colorado State Forest Service, and local fire protection district for presuppression planning and suppression activities.

DECISIONS BY EMPHASIS AREA

This section describes management decisions for geographic pieces of land called emphasis areas. Emphasis areas are delineated on Map 20. The management ascribed to these emphasis areas provides the basis for management presented in the Resources by Decision section of this chapter.

Within each emphasis area, the management of a particular resource will be emphasized over all other resources. That is not to say that one resource will be excluded. They will be allowed so long as they are compatible with management of the emphasized resource. Future proposals will be evaluated in the context of the management philosophy of the emphasized area to determine whether the proposal is compatible.

Area A-1: Emphasis on Recreation

Recreation

Manage Ruby Canyon as an intensive recreation management area. Require permits for commercial floatboating use and allow motorized boat use. Analyze the need to require private boaters to obtain river permits in a recreation management plan for the area. Follow minimum impact camping regulations. Maintain semi-primitive recreation opportunities with emphasis on maintenance of the natural setting. Provide for public boating access to Ruby Canyon through acquisition and development of the Loma launch site or alternate launch site as determined in the Ruby Canyon Recreation Area Management Plan.

Locatable Minerals

Close approximately 4,000 acres (one-quarter mile on the north side of the river) to mineral location to protect the recreational setting. Open the remainder of the area to location.

Oil and Gas

Make available for leasing approximately 8,000 acres (one-half mile on the north side of the river) with a no surface occupancy stipulation to protect the high value recreational and scenic resources associated with the Colorado River corridor. Protect habitat of the threatened and endangered species, riparian habitat, and perennial streams with other stipulations.

Mineral Materials

Close approximately 8,000 acres (one-half mile on the north side of the Colorado River) to mineral materials sales and free use permits.

Wildlife

Manage wildlife habitat primarily for endangered and riparian species. Focus wildlife management on improving the chances of cottonwood survival and increasing the area of the cottonwood stands along the Colorado River. Maintain woody riparian habitat to favor the tallest plant species native to each site while promoting diversity in plant heights and species. Prohibit surface disturbance in riparian areas. Maintain habitat to support the resident deer population.

Threatened and Endangered Species

Identify approximately 5,750 acres of bald eagle and peregrine falcon habitat for active management and protection. Protect bald eagle concentration areas from surface-disturbing activities from December 1 to April 1. Protect active peregrine falcon nests from surface-disturbing activities from March 15 to July 1. Protect known important habitat sites of sensitive animal and plant species and communities from surface-disturbing activities. Provide suitable habitat for the reintroduction of peregrine falcon and the four endemic Colorado River fish in cooperation with the Colorado Division of Wildlife and U.S. Fish and Wildlife Service.

Livestock Grazing

Continue livestock grazing. Allow no additional livestock trails to be constructed to the river bottomland. Give special attention to riparian areas in the implementation of livestock grazing management plans. Maintain riparian areas to appear natural with grassy river bottomlands, native shrubs and tree species, particularly cottonwoods.

Visual Resources

Identify and manage approximately 8,000 acres (one-half mile on the north side of the Colorado River) as a visual resource management class II area.

Off-Road Vehicles

Limit vehicles to existing roads on the north side of the Colorado River to protect scenic values. Close the south side of the river to vehicles because of the wilderness recommendation.

Wilderness

Recommend the south side of the Colorado River as wilderness as part of the Black Ridge Canyons Wilderness Study Area. Allow motorized boats to land on the south side of the river.

Land Tenure

Acquire the Loma launch site or an alternate site for use as a public access point for boating in Ruby Canyon.

Public Utilities

Identify the area containing the railroad and a proposed water pipeline at Crow Bottom (200 acres) as sensitive. Identify the rest of the area (7,800 acres) as unsuitable.

Transportation

Close roads that no longer serve their primary purpose and that have relatively little value to multiple use management to protect wildlife. (The highest priority for

closure will be roads in critical areas having a good chance of success in closure.)

Fire

Manage the entire emphasis area for full suppression and the Loma launch site (3 acres) for critical fire suppression.

Area A-2: Emphasis on Recreation

Recreation

Designate and manage approximately 40,000 acres in the Bang's Canyon area as an intensive recreation management area (as part of the Grand Valley Intensive Recreation Management Area) to maintain semi-primitive motorized and non-motorized recreation opportunities, scenic and natural values, and activities such as horseback riding, hiking, and trail-oriented off-road vehicle use. Protect Rough, Ladder, Northeast Creek, and Bang's Canyons from surface-disturbing activities. Protect a portion of Rough Canyon for purposes of geologic interpretation and education under the Rough Canyon Area of Critical Environmental Concern designation. Manage Cactus Park to accommodate group use and special events. Identify the Little Park Road area as a no-shooting zone. Analyze the need to require private boaters to obtain river permits in a recreation management plan for the area. Require permits on the Gunnison River for commercial boating use. Permit small improvement projects such as spring developments, fencing, water catchments, and vegetative manipulations (20 acres or less). Permit the collection of down and dead fuelwood along the Gunnison River only for immediate campfire use. Protect the natural scenic settings along the river. Continue management of the Dominguez Recreation Site and the Bridgeport river launch site and trailhead.

Soils

Protect approximately 1,000 acres of critically-eroding soils in Cactus Park by limiting surface-disturbing activities.

Water

Reduce sediment yield from the Rough Canyon and Cactus Park areas (10,000 acres). Reduce salinity yield from the Rough Canyon area (3,700 acres). Treat two severely-eroding channels in the Rough Canyon area (8.3 miles) and the severely-eroding channel in Cactus Park (2.9 miles).

Locatable Minerals

Close the Dominguez Recreation Site (40 acres) to mineral location. Open the remainder of the area except for existing withdrawals.

Oil and Gas

Make available for leasing approximately 30,033 acres with standard lease terms; 52,300 acres with other stipulations to protect a research natural area (Gunnison Gravels), scenic and natural values (Bang's Canyon Intensive Recreation Management Area), deer and elk winter range, perennial streams, threatened and endangered species, and steep slopes; and 24,550 acres for leasing with a no surface occupancy stipulation to protect the Gunnison River corridor, three known cultural sites, a developed recreation site, Bang's Canyon area cliffs and canyons, and the Rough Canyon Area of Critical Environmental Concern.

Mineral Materials

Close approximately 15,080 acres in Dominguez Recreation Site, Rough, Ladder, Bang's, and Northeast Creek Canyons and the Gunnison Gravels to mineral materials sales or free use permits.

Forestry

Identify approximately 30,373 acres of productive pinyon-juniper woodlands and 654 acres of commercial forest land as suitable for management and harvesting. Identify approximately 79 acres of productive pinyon-juniper woodlands on Gibbler Mountain as unsuitable for management and harvesting because of adverse location. Limit cutting units in the Bang's Canyon Intensive Recreation Management Area to 20 acres or less in the pinyon-juniper woodlands to protect recreation and scenic values. Reclaim all new roads in the Bang's Canyon Intensive Recreation Management Area following logical development. Design fuelwood sales to benefit wildlife objectives on big game winter range. Authorize only commercial fuelwood harvest in Northeast Creek Canyon. Ensure that all roads constructed for timber harvesting are temporary, rehabilitated to blend in with the characteristic landscape, and not evident to the casual observer.

Wildlife

Manage wildlife habitat primarily for deer, elk and wild turkey. Focus management on drawing big game winter use out of Glade Park and into this emphasis area. Protect deer and elk critical winter range from disturbing activities from December 1 to May 1. Provide habitat in the upper Dominguez Canyon area for the rehabilitation of wild turkey. Maintain sport fisheries in Northeast, Big and Little Dominguez Creeks. Maintain woody riparian habitat to favor the tallest plant species native to each site while promoting diversity in plant heights and species. Prohibit surface disturbance within 100 feet of perennial streams, except at necessary stream crossings. Within vegetation conversion projects, exclude one-fifth of the area (the 20 percent that produces the most fruit) from the treatment to maintain food for fruit-dependent wildlife. Retain 30 percent of sagebrush manipulation areas in leave strips or untreated patches. Areas to be reserved from treatment will be selected with flexibility to accommodate feasibility.

Threatened and Endangered Species

Identify approximately 48,525 acres (much of it overlapping) of spineless hedgehog cactus, Uinta Basin hookless cactus, and bald eagle habitat for active management and protection. Protect bald eagle concentration areas from surface-disturbing activities from December 1 to April 1. Protect two species of endangered and threatened cacti. Protect known important habitat sites of sensitive plant and animal species from surface-disturbing activities.

Livestock Grazing

Give special attention to the visual and ecological integrity of riparian areas in the implementation of livestock grazing management plans.

Cultural Resources

Actively manage Rough Canyon, Ladder Springs, and Cactus Park archaeological sites (approximately 1,740 acres) as high value site areas.

Off-Road Vehicles

Limit vehicle use in the Bang's Canyon Intensive Recreation Management Area to designated roads and trails to protect the natural scenic setting. Close the area around the Dominguez Recreation Site (1,280 acres) in conjunction

with the U.S. Forest Service road closure during winter and spring when the roads are wet. Limit vehicle use in the remainder of the area to existing roads.

Visual Resources

Manage Bang's, Rough, Ladder and Northeast Creek Canyons (14,080 acres), the cliffs of Unaweep Canyon (14,080 acres), and the Gunnison River corridor (8,960 acres) under VRM Class II objectives. Manage the benches in the Bang's Canyon Intensive Recreation Management Area (25,920 acres) and the valley of Unaweep Canyon (6,400 acres) under visual resource management Class III objectives.

Special Management Areas

Designate Rough Canyon as an area of critical environmental concern to protect scientific, geologic, archaeologic, and botanical values. Designate Gunnison Gravels as a research natural area to protect scientific geologic values.

Public Utilities

Identify one developed recreation site, the Gunnison River corridor, the canyons in the Bang's Canyon area, three high value archeological sites, and disposal tracts (totaling 24,550 acres) as unsuitable for public utilities. Identify threatened and endangered species habitat, Gunnison Gravels, perennial streams, deer and elk winter range, bighorn sheep range, slopes greater than 40 percent, and the remainder of Bang's Canyon (52,300 acres) as sensitive to public utilities. Identify a half-mile wide corridor along the Unaweep Canyon road for telephone and small electrical distribution lines.

Transportation

Acquire public access for general resource management from Unaweep Canyon to Little Park and Cactus Park. Close roads that no longer serve their primary purpose and that have relatively little value to multiple use management to protect wildlife. (The highest priority for closure will be roads in critical areas having a good chance of success in closure.)

Fire

Manage portions of this emphasis area (1) to protect adjacent private property through the prevention of fire spread from public land; (2) to protect tall conifers, riparian areas, cultural resource structures, and improvements such

as the Dominguez Recreation Site; or (3) to reduce suppression costs and, as a secondary benefit, increase the vegetative mosaic in the Bang's Canyon area.

Area Cc: Emphasis on Coal

Coal

(Note: The Little Book Cliffs Wilderness Study Area lies partially within this emphasis area but mostly within the wild horse emphasis area E. Therefore, all discussion on management of the Little Book Cliffs WSA is presented under emphasis area E.)

Identify approximately 350,389 acres as acceptable for further coal leasing consideration. This includes the Little Book Cliffs and Demaree Canyon Wilderness Study Areas, presently identified as unsuitable for leasing based on Coal Unsuitability Criterion 4 (see Appendix C). Identify the unleased portion of the Palisade municipal watershed (10,000 acres) and the Colorado River corridor (4,100 acres) as unsuitable based on Coal Unsuitability Criteria 3 and 17, respectively (see Appendix C). The coal unsuitability criteria were not applied to existing coal leases. Allow the existing coal leases (covering 4,000 acres) in the Palisade municipal watershed to develop. Add stipulations to protect the watershed to the mine plan during the mine plan approval process. Identify approximately 162,660 acres as sensitive to coal development based on Coal Unsuitability Criteria 2, 3, 7, 9, 10, 11, 13, 14, 15 and 19 (see Appendix C). Place stipulations on coal development within these areas to protect the sensitive resources (see Appendix C). Prohibit surface facilities in the following areas: Baxter/Douglas Pass soil slump area, elk calving area, and the Goblins.

Soils

Protect approximately 18,000 acres with extremely high slump hazard in the Baxter/Douglas Pass area by limiting surface-disturbing activities and prohibiting surface occupancy.

Water

Reduce sediment yield from the upper Big Wash watershed (1,500 acres). Reduce salinity yield from upper Big Wash watershed (1,200 acres). Treat approximately 5.2 miles of severely-eroding stream channel in Horseshoe Canyon. Protect the Palisade municipal watershed (14,000 acres) from surface-disturbing activities that adversely affect water supplies.

Locatable Minerals

Open the entire area to mineral location except for existing withdrawals.

Oil and Gas

Make available for leasing approximately 243,776 acres with standard lease terms; 26,520 acres with a no surface occupancy stipulation to protect the cliffs above Palisade, Mount Garfield, scenic Book Cliffs adjacent to Mount Garfield, Douglas/Baxter Pass soil slump area, a state recreation area (Island Acres), scenic and natural values (the Goblins), Hunter/Garvey Canyons cliffs; and approximately 170,500 acres with other stipulations to protect steep slopes, threatened and endangered species, scenic and natural values (Colorado 139 and Hunter/Garvey Canyons benches), elk calving area, deer and elk winter range, perennial streams, the Palisade municipal watershed, the Colorado River corridor along De Beque Canyon and I-70, the Grand Mesa slopes, Baxter and Douglas Pass scenic corridor, and the Book Cliffs west of Carpenter (27-1/2 Road).

Continue to close the Demaree Canyon Wilderness Study Area to additional leasing based on congressional appropriations that prohibit leasing in wilderness study areas. Lease the area with stipulations if it is designated as nonwilderness and thus made available for leasing. Allow existing leases issued prior to the passage of the *Federal Land Policy and Management Act* (FLPMA) of 1976 to develop in this wilderness study area, subject to the unnecessary or undue degradation standard if nonimpairment cannot be met. Following congressional action on wilderness recommendations, open Demaree Canyon Wilderness Study Area to leasing.

Mineral Materials

Close the following areas to mineral materials sales and free use permits: the Goblins (80 acres), Island Acres Recreation Area (80 acres), elk calving area (400 acres), the critical soils area (18,000 acres), Plateau Creek slump (860 acres), Baxter/Douglas Pass visual resource management Class II area (1,920 acres), Hunter/Garvey Canyons (7,600 acres). Open the remainder of the area.

Forestry

Identify approximately 15,924 acres of productive pinyon-juniper and 96 acres of commercial forest land as suitable for management and harvesting. Identify approximately 1,405 acres of productive pinyon-juniper woodlands and 802 acres of commercial forest land in the following

locations as unsuitable for management and harvesting: Palisade municipal watershed (1,207 acres); Mount Lincoln (264 acres), adverse location; Corcoran Point (336 acres), fragile soils; Baxter/Douglas Pass area (400 acres), elk calving sites. Prohibit dead pinyon and juniper harvesting west of Big Salt Creek. The first priority for manipulating pinyon-juniper woodlands will be harvesting. Design fuelwood sales to meet wildlife objectives on big game winter range.

Wildlife

Manage wildlife habitat primarily for deer, elk, and bear. Focus wildlife management on expanding the area useable as summer range for deer. Identify deer and elk critical winter range as sensitive to coal leasing (see Appendix C). Prohibit disturbing activities in deer and elk critical winter ranges from December 1 to May 1 and in elk calving areas from May 15 to June 15. Protect aspen stands and identified calving sites within the elk calving area from surface disturbance. Within vegetation conversion projects, exclude one-fifth of the area (the 20 percent that produces the most fruit) from the treatment. This will maintain food for fruit-dependent wildlife. Retain 30 percent of sagebrush manipulation areas in leave strips or untreated patches. Areas to be reserved from treatment will be selected with flexibility to accommodate feasibility. Maintain woody riparian habitat to favor the tallest plant species native to each site while promoting diversity in plant heights and species. Prohibit surface disturbance within 100 feet of perennial streams, except at necessary stream crossings. Maintain or improve the fisheries potential in East and Big Salt Creeks.

Threatened and Endangered Species

Identify approximately 37,100 acres (much of it overlapping) of spineless hedgehog and Uinta Basin hookless cacti, bald eagle, and peregrine falcon habitat for active management and protection. Protect bald eagle concentration areas from surface-disturbing activities from December 1 to April 1. Protect active peregrine falcon nests from surface-disturbing activities from March 15 to July 1. Protect two species of endangered and threatened cacti. Protect known important habitat sites of sensitive plant and animal species from surface-disturbing activities.

Livestock Grazing

Give special attention to the ecological integrity of riparian areas in the implementation of livestock grazing management plans.

Cultural Resources

Identify 54 significant cultural sites and one region (Transect 7, on which procedures for nomination to the National Register of Historic Places have been initiated) as sensitive to surface-disturbing activities. The total acreage is 9,100 acres.

Recreation

Manage the emphasis area as an extensive recreation management area. Manage Hunter and Garvey Canyons to provide opportunities for semi-primitive motorized and non-motorized recreation. Manage the Demaree Canyon area for semi-primitive motorized recreation.

Off-Road Vehicles

Close the Palisade municipal watershed (4,640 acres) to vehicle use. Limit vehicle use in the Baxter/Douglas Pass soil slump area (18,000 acres) to designated roads and trails. Close Big Salt Wash and Coal Gulch (13,440 acres) and Demaree Canyon (21,050 acres) to vehicle use from December 1 to May 1 to protect deer on critical winter range. Limit the remainder of the area to existing roads.

Visual Resources

Manage the cliffs of Hunter/Garvey Canyons (7,600 acres) under visual resource management Class II objectives. Manage De Beque Canyon (7,040 acres), Baxter/Douglas Pass roads (19,200 acres), and Hunter/Garvey Canyon benches (11,400 acres), and the face of the Book Cliffs (13,000 acres) west of Carpenter Trail under visual resource management Class III objectives.

Wilderness

Recommend the Demaree Canyon Wilderness Study Area to Congress as nonsuitable for wilderness. Following release by Congress, manage the area as described for this emphasis area.

Public Utilities

Identify the Hunter/Garvey Canyons cliffs, Island Acres, the Goblins, the Douglas Pass canyon cliffs, and the unstable soils in the Baxter/Douglas area (26,520 acres) as unsuitable for public utilities. Identify threatened and endangered species habitat, scenic and natural values, Demaree Canyon, the remainder of the Hunter/Garvey Canyon area, the remainder of the Douglas Pass area, deer and elk winter range, elk calving areas, perennial streams, the Palisade municipal watershed, the Colorado River corridor, and slopes greater than 40 percent as sensitive to public utilities (170,500 acres).

Identify a half-mile wide corridor along the existing Mid-America Pipeline Company and the Northwest Pipeline Company routes along West Salt Creek and State Highway 139. Determine the northern ends of these corridors following additional analysis of pending project proposals. Approval of major utility projects in these areas will result in corridor designation. Designate a half-mile wide corridor for major power lines in Coal Canyon. Approval of the Public Service Company Grand Valley Conversion project will result in a half-mile wide designated corridor along most of the public lands portion of that project. Designate a corridor for large power lines (approximately four miles wide) from the resource area boundary near De Beque to the southern resource area boundary along Highway 50.

Transportation

Acquire public access to Barrel Springs, Buniger Road, South Canyon, Douglas Pass East, and Prairie Canyon for general resource management. Acquire administrative access from Douglas Pass to Baxter Pass for general resource management. Acquire trail access through Hunter Canyon for recreation use. Prohibit new roads construction in Hunter Canyon. Close roads that no longer serve their primary purpose and that have relatively little value to multiple use management to protect wildlife. (The highest priority for closure will be roads in critical areas having a good chance of success in closure.)

Fire

Manage portions of this emphasis area (1) to protect coal outcrops, oil and gas facilities, pumping stations, and other improvements; (2) to minimize potential soil erosion following severe wildfires on steep slopes, protect tall conifers, cultural resource structures, the Palisade municipal watershed, and riparian areas; (3) to reduce equipment damage on hazardous soil slump areas and maintain livestock forage in chainings; or (4) to improve forage conditions for livestock and wildlife in areas to be burned under prescribed conditions.

Area Co-1: Emphasis on Oil and Gas

Oil and Gas

Make available for leasing approximately 122,690 acres with standard lease terms; 4,570 acres with a no surface occupancy stipulation to protect the Pyramid Rock Research Natural Area; and 76,120 acres with other stipulations to protect scenic and natural values (South Shale Ridge), perennial streams, steep slopes, deer and elk winter range, I-70 scenic corridor, and threatened and endangered species.

Water

Reduce sediment yield from an area south of South Shale Ridge and north of Sulphur Gulch (9,700 acres), an area northwest of Corcoran Wash (3,800 acres), and an area east of lower Roan Creek (3,100 acres). Reduce salinity yield from an area south of South Shale Ridge and north of Sulphur Gulch (6,500 acres) and an area east of lower Roan Creek (1,000 acres). Treat stream channels on two tributaries of Dry Fork (2.5 miles).

Locatable Minerals

Open the entire area to mineral location except for areas closed because of existing withdrawals.

Mineral Materials

Close Pyramid Rock (470 acres) to mineral materials sales and free use permits. Open the remainder of the area.

Forestry

Identify approximately 4,192 acres of productive pinyon-juniper woodlands as suitable for management and harvesting. Revise the Roan Creek Habitat Management Plan to allow harvest of pinyon-juniper prior to vegetation manipulations.

Wildlife

Continue to manage wildlife habitat primarily for mule deer as outlined in the Roan Creek Habitat Management Plan. Prohibit disturbing activities in deer and elk critical winter ranges from December 1 to May 1. Within vegetation conversion projects, exclude one-fifth of the area (the 20

percent that produces the most fruit) from the treatment. This would maintain food for fruit-dependent wildlife. Retain 30 percent of sagebrush manipulation areas in leave strips or untreated patches. Areas to be reserved from treatment will be selected with flexibility to accommodate feasibility. Maintain woody riparian habitat to favor the tallest plant species native to each site while promoting diversity in plant heights and species. Prohibit surface disturbance within 100 feet of perennial streams, except at necessary stream crossings.

Threatened and Endangered Species

Identify approximately 33,500 acres (much of it overlapping) of bald eagle, Colorado River cutthroat trout, and Uinta Basin hookless cactus habitat for active management and protection. Protect bald eagle concentration areas from surface-disturbing activities from December 1 to April 1. Protect active peregrine falcon nests from surface-disturbing activities from March 15 to July 1. Improve and protect six miles of Colorado River cutthroat trout stream. Protect the Uinta Basin hookless cactus sites and the black-footed ferret, if present. Give a special protective designation to any newly found population of the cactus that exceeds 5 percent of the De Beque population. Protect known important habitat sites of sensitive animal and plant species from surface-disturbing activities.

Livestock Grazing

Give special attention to the ecological integrity of riparian areas in the implementation of livestock grazing management plans.

Recreation

Identify the entire area as an extensive recreation management area. Manage South Shale Ridge (22,500 acres) to protect the natural setting and unique scenic geologic features of the area.

Off-Road Vehicles

Limit vehicle use in the Pyramid Rock RNA (470 acres) and South Shale Ridge (22,500 acres) to designated roads and trails. In South Shale Ridge, close any new industrial roads to public vehicle use to protect the natural scenic setting.

Visual Resources

Manage South Shale Ridge (22,500 acres) as a visual resource management Class III area.

Special Management Areas

Designate approximately 470 acres surrounding Pyramid Rock as a research natural area, thereby reserving habitat for two plant species, one a sensitive and the other a threatened species.

Public Utilities

Identify the Pyramid Rock Research Natural Area (470 acres) as unsuitable for public utilities. Identify South Shale Ridge, threatened and endangered species habitat, known locations of sensitive species, deer and elk winter range, perennial streams, and slopes greater than 40 percent as sensitive to public utilities (76,120 acres). Identify the remainder of the area as suitable. Designate a one mile wide corridor along Roan Creek from De Beque to the Community Center for railroads, power lines, and water and oil and gas pipelines. Designate a one-half mile wide corridor along Clear Creek from the Community Center to the northern resource area boundary for major power lines and oil and gas pipelines.

Transportation

Acquire public access from Carr Creek to Douglas Pass, Middle North Dry Fork, Brush Mountain, Cow Ridge, 4A Mountain, and Horse Mountain for general resource management. Acquire administrative access for forest management to Hopple Gulch and Tater Hills. Close roads that no longer serve their primary purpose and that have relatively little value to multiple use management to protect wildlife. (The highest priority for closure will be roads in critical areas having a good chance of success in closure.)

Fire

Manage portions of this emphasis area (1) to protect adjacent private property through the prevention of fire spread from public land, protect tall conifers, riparian areas, and cultural resource structures; (2) to protect oil and gas facilities, pumping stations, and other improvements; or (3) to improve forage conditions for livestock and wildlife in areas to be burned under prescribed conditions.

Area Co-2: Emphasis on Oil and Gas

Oil and Gas

Make available for leasing approximately 55,248 acres with standard lease terms; 2,100 acres with a no surface occupancy stipulation to protect Vega Reservoir state recreation site and the Plateau Creek soil slump area; and 37,051 acres with other stipulations to protect scenic and natural values, perennial streams, steep slopes, deer and elk winter range, Transect 7 archaeological site, Plateau Canyon scenic corridor (Highway 330), and threatened and endangered species habitat.

Water

Reduce sediment yield from an area east of the De Beque cutoff road (2,200 acres). Reduce salinity yield from an area east of the De Beque cutoff road (900 acres). Treat approximately 3.2 miles of eroding stream channel along Sand Wash. Protect the watershed above the Jerry Creek Reservoirs from surface-disturbing activities.

Locatable Minerals

Open the entire area to mineral location except for areas closed because of existing withdrawals.

Mineral Materials

Close the area behind Jerry Creek Reservoirs (1,160 acres), Grand Junction municipal watershed (1,240 acres), and Vega Reservoir (2,160 acres) to mineral sales and free use permits. Open the remainder of the area.

Forestry

Identify approximately 1,979 acres of productive pinyon-juniper woodlands as suitable for management and harvesting. Design fuelwood sales to benefit wildlife in critical big game winter range.

Wildlife

Manage wildlife habitat primarily for deer and elk. Focus management on increasing the percent of big game use on public land in winter. Prohibit disturbing activities in deer and elk critical winter ranges from December 1 to May 1. Within vegetation conversion projects, exclude one-fifth of the area (the 20 percent that produces the most fruit) from the treatment to maintain food for fruit-dependent wildlife. Retain 30 percent of sagebrush manipulation areas in leave strips or untreated patches. Areas reserved from treatment will be selected with flexibility to accommodate feasibility. Maintain woody riparian habitat to favor the tallest plant species native to each site while promoting diversity in plant heights and species. Prohibit surface disturbance within 100 feet of perennial streams, except at necessary stream crossings. Maintain sport fisheries in Plateau Creek and two tributaries.

Threatened and Endangered Species

Identify approximately 24,610 acres (much of it overlapping) of bald eagle and Uinta Basin hookless cactus habitat for active management and protection. Protect bald eagle concentration areas from surface-disturbing activities from December 1 to April 1. Protect Uinta Basin hookless cactus sites from surface disturbance. Protect known important habitat sites of sensitive animal and plant species from disturbing activities.

Livestock Grazing

Give special attention to the ecological integrity of riparian areas in the implementation of livestock grazing management plans.

Recreation

Identify the entire area for extensive recreation management.

Visual Resources

Manage Vega Reservoir (120 surface acres) under visual resource management Class II objectives.

Off-Road Vehicles

Close The Beehive (3,200 acres), Chalk Mountain (6,400 acres), and Sunnyside (4,820 acres) areas to vehicle use from December 1 to May 1 to protect deer and elk on critical winter range. In these areas, limit vehicle use during other times of the year to existing roads and trails.

Transportation

Close roads that no longer serve their primary purpose and that have relatively little value to multiple use management to protect wildlife. (The highest priority for closure will be roads in critical areas having a good chance of success in closure.)

Public Utilities

Identify the Vega Reservoir area and Plateau Creek slump as unsuitable for public utilities. Identify threatened and endangered species habitat, deer and elk winter range, perennial streams, slopes greater than 40 percent, Vega Reservoir viewshed, and Transect 7 (a total of 37,051 acres) as sensitive to public utilities. Identify the remainder of the area as suitable. Designate a major corridor (approximately four miles wide) on the west end of this emphasis area for major power lines.

Fire

Manage portions of this emphasis area (1) to protect adjacent private property through the prevention of fire spread from public land, protect riparian areas, and prevent catastrophic fires due to the presence of hazardous fuel types; or (2) to improve forage conditions for livestock on areas to be burned under prescribed conditions.

Area Dp: Emphasis on Wilderness

Wilderness

Recommend four wilderness study areas totaling 166,340 acres for wilderness designation pending U.S. Geological Survey/Bureau of Mines mineral reports — Black Ridge Canyons (19,595 acres), Black Ridge Canyons West (54,342 acres), Dominguez Canyon (73,568 acres), and Sewemup Mesa (18,835 acres). Modify the boundaries to improve manageability and reduce resource conflicts as shown in Appendix I of the draft resource management plan and environmental impact statement (RMP EIS). Following

congressional action, manage the resources within these wilderness areas as described under this emphasis area. Note: If these wilderness study areas are not designated wilderness by Congress, they will be managed as described in Appendix I of the draft RMP EIS.

Air Quality

Manage the area so as not to violate Class II prevention of significant deterioration standards.

Water

Restore watersheds only where deteriorated soil and hydrologic conditions threatened life, property, or loss of wilderness values and where natural recovery will be unlikely. Allow new or expanded water developments only when approved by the President. Maintain existing water structures if they are in the public interest or if they have a valid existing right. Use non-motorized means of access wherever and whenever feasible for maintenance of reservoirs. Maintain or enhance water quality consistent with the protection of wilderness values.

Locatable Minerals

Close all four wilderness areas to mineral location, except for pre-FLPMA claims determined to have valid discoveries.

Oil and Gas

Continue to close all wilderness study areas to additional leasing based upon congressional appropriations that prohibit leasing in wilderness study areas. Permanently close the area if designated wilderness by Congress.

Mineral Materials

Close all areas to mineral materials sales and free use permits.

Forestry

Identify approximately 18,479 acres of productive pinyon-juniper woodlands and 562 acres of commercial forest land as unsuitable for management and harvesting other than to control insects and diseases. (This acreage includes 2,762 acres of productive pinyon-juniper woodland

and 17 acres of commercial forest land in the Montrose District.)

Wildlife

Manage wildlife habitat to approximate a natural distribution, number and interaction of indigenous fish and wildlife. Allow hunting, fishing, and incidental trapping (where it is not the trapper's sole source of livelihood). Maintain suitable habitat for bighorn sheep in the Black Ridge Canyons and Dominguez Canyon areas. Maintain woody riparian habitat to favor the tallest plant species native to each site while promoting diversity in plant heights and species. Provide habitat for increasing the deer herd in the Dominguez Canyon area from 10 to 30 per square mile.

Threatened and Endangered Species

Provide suitable habitat for the relocation of peregrine falcon. Provide habitat for relocation of other endangered species such as a breeding pair of bald eagles and the bonytail chub.

Livestock Grazing

Continue livestock grazing at levels authorized prior to wilderness designation. Manage grazing allotments as outlined in approved allotment plans. Maintain rangeland improvements. Reevaluate projects proposed in the grazing environmental impact statement and new projects prior to implementation to determine effects on wilderness values. Monitor trailing of livestock through Big Dominguez Creek to eliminate concentration of livestock during trailing. Continue to prohibit livestock grazing on the top of Sewemup Mesa. Allow no improvements to be made for livestock access to the Colorado River corridor. Where practical alternatives (such as horseback) do not exist, accomplish maintenance or other activities through the occasional use of motorized equipment such as backhoes to maintain stock ponds, pickup trucks for major fence repair, or special equipment to repair stock watering facilities. Use the minimum tools required to do the maintenance.

Recreation

Allow visitor use consistent with preservation of wilderness values. Limit the number of facilities, improvements, and signs to those necessary to protect wilderness resources or to provide for the health and safety of visitors. Develop a trail access area in Sinbad Valley to direct use into Sewemup Mesa. In Black Ridge, allow motorized boats to land on the south side of Ruby Canyon. Issue recreation

permits for commercial recreational uses. Develop access points at Pollack, Rattlesnake, Knowle's, Jones, and Mee Canyons. Enforce minimum impact camping regulations along the Colorado and Gunnison Rivers to protect riparian habitat. Maintain access points at Bridgeport, the Dominguez Recreation Site, and at Gunnison Gulch for the Escalante area.

Off-Road Vehicles

Close all areas to vehicle use. Issue special permits for administration of livestock grazing allotments.

Visual Resources

Manage all areas under visual resource management Class I objectives.

Land Tenure

Recommend approximately 320 acres of private land and 600 acres of state land within the Dominguez Canyon area for acquisition.

Transportation

Permit roads only where subject to valid existing rights or specifically provided for in wilderness management plans. Maintain hiking and horse trails to preserve wilderness values. Maintain legal foot access at Bridgeport for access to Dominguez Canyon. Provide administrative access to Star Mesa. Acquire public trail access in Little Dominguez Canyon. Acquire public access on the west side of Sewemup Mesa. Allow administrative access in Black Ridge Canyons, Colorado Ridge, and the Bench Road. Acquire continuous public access over the Pollack, Flume, and Devil's Canyons trails.

Public Utilities

Identify all four areas (166,340 acres) as unsuitable for public utilities.

Fire

For each designated wilderness area, prepare a fire management plan that identifies the role fire will play in each wilderness ecosystem. Have these plans define fire

management objectives for a wilderness ecosystem and the acceptable limits of fire behavior and fire effects. Give preference of fire management measures and techniques to the methods and equipment which least alter the landscape or disturb the land surface. Manage wildfire in Ruby Canyon under full suppression to protect cottonwood trees and riparian values.

Area E: Emphasis on Wild Horses

Wild Horses

The Little Book Cliffs Wilderness Study Area lies mostly within this emphasis area and partially within the coal emphasis area Cc. All discussions on management of the Little Book Cliffs Wilderness Study Area are included in this emphasis area.

Manage the Little Book Cliffs Wild Horse Range to accommodate a herd of from 65 to 125 wild horses. Prohibit livestock grazing. Periodically, place wild horses from other areas in the area to avoid undesirable effects of inbreeding. Expand the existing wild horse range (27,881 acres) to 30,261 acres to include approximately 2,380 acres of critical horse winter range. This winter range has been historically used by the horses but was omitted from the original designation. It is also not used by domestic livestock because of the steep terrain.

Manage the Little Book Cliffs Wild Horse Range as outlined in the wild horse management plan except it would be available for oil and gas leasing and further coal leasing consideration pending further study. Also, designate Coal Canyon as a utility corridor for power lines.

Locatable Minerals

Identify approximately 30,261 acres as available for mineral location.

Coal

Identify approximately 26,801 acres as acceptable for further leasing consideration. (This includes 15,434 acres in the Little Book Cliffs Wilderness Study Area presently identified as unsuitable for leasing based upon coal unsuitability Criterion 4 (Appendix C)).

Oil and Gas

Make available for leasing approximately 30,261 acres with stipulations to protect scenic and natural values in the entire area, wild horse winter range, wild horse foaling area, and deer and elk winter range.

Continue to close the Little Book Cliffs Wilderness Study Area to additional leasing based upon congressional appropriations that prohibit leasing in wilderness study areas. Lease the area with stipulations if it is designated as nonwilderness and thus made available for leasing. Allow leases issued prior to the passage of the *Federal Land Policy and Management Act* (FLPMA) of 1976 to develop in this wilderness study area. This includes eight pending applications to drill (APDs) in areas leased prior to the passage of the *Federal Land Policy and Management Act*. Following congressional action on wilderness recommendations, open the Little Book Cliffs Wilderness Study Area to leasing with stipulations.

Mineral Materials

Close the entire area (30,261 acres) to mineral materials sales and free use permits.

Forestry

Identify approximately 6,639 acres of productive pinyon-juniper woodlands as suitable for management and harvesting. Limit fuelwood sales to commercial operators only. Also, limit fuelwood sales to 30 acres or less, and design them to meet management objectives for wild horses.

Wildlife

Manage wildlife habitat primarily for deer. Focus wildlife management on improving the quality of deer winter forage. Prohibit disturbing activities in deer critical winter ranges from December 1 to May 1. Maintain approximately 14 acres of riparian habitat within Jerry and Cottonwood Creeks.

Threatened and Endangered Species

Identify approximately 2,500 acres of peregrine falcon habitat for active management and protection. Protect known important habitat sites of sensitive animal and plant species from surface-disturbing activities.

Recreation

Manage the wild horse area as an extensive recreation management area.

Off-Road Vehicles

Limit vehicle use in the wild horse range to designated roads and trails to protect wild horses and deer on critical winter range. In addition, close Coal Canyon to vehicle use from March 1 to June 30 to protect wild horses during foaling and critical deer winter range. Close all foot and horseback riding trails and the Adobe and Carpenter Trails to all vehicular use.

Visual Resources

Manage the Little Book Cliffs Wild Horse Range as a visual resource management Class III area.

Wilderness

Recommend the Little Book Cliffs Wilderness Study Area as nonsuitable for wilderness. (Note: Because of existing oil and gas leases issued prior to the passage of the *Federal Land Policy and Management Act*, this wilderness study area may be impaired prior to congressional action.) Following release by Congress, manage the resources within the area as described under this emphasis area.

Land Tenure

Recommend approximately 966 acres of private property for acquisition.

Public Utilities

Designate Coal Canyon (1,280 acres) as a utility corridor for power lines only. Identify the remainder of the area (28,981 acres) as sensitive.

Transportation

Acquire public access up Corcoran Wash to the wild horse range for general resource management. Acquire trail access across the Adobe and Carpenter Trails for wild horse and recreation management. Close all new industry roads

to public use. Close old roads that no longer serve their primary purpose and that have relatively little value to multiple use management to protect wildlife. (The highest priority for closure will be roads in critical areas having a good chance of success in closure.)

Fire

Manage portions of this emphasis area (1) to reduce fire suppression costs and, as a secondary benefit, increase vegetative diversity; or (2) to protect coal outcrops, oil and gas facilities, and other improvements.

Area F: Emphasis on Water

Water

Take measures to reduce sediment yield from approximately 117,000 acres and salinity yield from approximately 133,000 acres in the Grand Valley desert. Treat severely-eroding stream channels in Hunter Wash (2.6 miles), Big Salt Wash (8.3 miles), and East Salt Creek (15.4 miles). Maintain the Badger Wash hydrologic study area to study the effects of surface-disturbing activities on sediment yield (paired watersheds of 685 acres). Maintain salinity control structures in Indian Wash and Leach Creek (approximately 6,000 acres). Prohibit surface-disturbing activities that would adversely affect water quality within the municipal watersheds around Juniata and Hollenbeck Reservoirs (1,760 acres).

Locatable Minerals

Open the entire area to mineral location except for those areas closed because of existing withdrawals.

Oil and Gas

Make available for leasing approximately 56,263 acres with standard lease terms; 25,400 acres with the no surface occupancy stipulation to protect Mount Garfield, Grand Junction municipal watershed, Badger Wash study area, Fruita and Rabbit Valley paleontological sites, Skipper's Island, two actively managed archaeological sites (Transect 7 and Indian Creek), a state recreation area, and scenic and natural values (Mount Garfield and the face of the scenic Book Cliffs adjacent to Mount Garfield); and 108,620 acres with other stipulations to protect scenic and natural values (face of the Book Cliffs west of Carpenter, Highway I-70 from Grand Junction to the stateline, Highway U.S.

50 from Grand Junction to Delta, and Grand Mesa slopes south of Watson Draw), steep slopes, Indian Wash dam, deer and elk winter range, and threatened and endangered species.

Mineral Materials

Close about 23,000 acres to mineral materials sales and free use permits to protect cultural, paleontological and watershed values.

Paleontology

Designate the Fruita site (280 acres) and the Rabbit Valley paleontological site (280 acres) as research natural areas and manage for their scientific values. Also manage Rabbit Valley for educational purposes.

Forestry

Identify approximately 4,769 acres of productive pinyon-juniper woodlands as suitable for management. Identify approximately 150 acres of productive pinyon-juniper woodlands in the Grand Junction municipal watershed and 1,654 acres in the Rabbit Valley area as unsuitable for management to protect water quality and wildlife values, respectively. Design fuelwood sales to benefit wildlife in critical winter range. Prohibit wood sales in nonproductive woodlands in the Grand Valley between the Book Cliffs and Colorado River and between Highway 50 and the Gunnison River.

Wildlife

Manage wildlife habitat primarily for pronghorn and game birds. Focus wildlife habitat management on reversing the downward trend in pronghorn populations, establishing new game bird areas and increasing the deer and elk winter forage between Whitewater and Deer Creeks. Prohibit disturbing activities in deer and elk critical winter ranges and migration corridors from December 1 to May 1. Retain 30 percent of sagebrush manipulation areas in leave strips or untreated patches. Areas reserved from treatment will be selected with flexibility to accommodate feasibility. Maintain woody riparian habitat to favor the tallest plant species native to each site while promoting diversity in plant heights and species. Prohibit surface disturbance within 100 feet of perennial streams, except at necessary stream crossings. Identify a location for a 30- to 60-acre reservoir and marsh to provide habitat for resident and migrant wildlife. This site will be made available for construction and management by appropriate agencies, which could include the Bureau

of Land Management, for public use. Maintain sport fisheries on the North Fork of Kannah Creek.

Threatened and Endangered Species

Identify approximately 64,800 acres (much of it overlapping) of bald eagle, spineless hedgehog cactus, and Uinta Basin hookless cactus habitat for active management and protection. Protect bald eagle concentration areas from surface-disturbing activities from December 1 to April 1. Protect two species of threatened and endangered cactus and the endangered black-footed ferret. Protect known important habitat sites of sensitive animal and plant species and communities from surface-disturbing activities.

Livestock Grazing

Initiate intensive grazing systems on all allotments in the Grand Valley desert. This will entail additional range projects and some change of grazing use to ensure ground cover, minimize soil loss, and manage for sod-forming species where appropriate. Give special attention to the ecological integrity of riparian areas in the implementation of livestock grazing management plans.

Cultural Resources

Actively manage the McDonald Creek and Indian Creek archaeological sites (approximately 510 acres) as high value areas.

Recreation

Manage the Grand Valley (which includes the Grand Valley desert and Rabbit Valley) as an intensive recreation management area. Identify the three off-road vehicle open areas (11,240 acres) for intensive public and competitive off-road vehicle use. Identify these same areas and a contiguous area extending 2 miles to the east of Mount Garfield as no shooting zones. Also identify a no shooting zone 1 mile either side of Little Park Road, beginning at the lower end of the road and extending 7 miles to the south. Manage Rabbit Valley to accommodate group uses such as horseback rides, group campouts, large picnics, archery, and scouting events. Use signs and public information materials to reduce user conflicts and unauthorized activities. Focus management on providing rural opportunities in the off-road vehicle open area and roaded natural opportunities in the remainder of the desert area. Address the need for active supervision of recreational uses in the management plan for the Grand Valley Intensive Recreation Management Area.

Off-Road Vehicles

Close the following areas to vehicle use: McDonald Creek (160 acres) to protect cultural values; Mount Garfield (1,280 acres), to protect scenic values, provide watershed protection and reduce user conflicts; the Badger Wash study area (685 acres), to protect watershed values; the *Cryptantha elata* study site (60 acres), to protect a sensitive plant study site; and the Fruita Paleontological Site (280 acres), to protect paleontological resources. Limit vehicle use near the Rabbit Valley paleontological site (280 acres) to designated roads. Designate three areas as open to cross-country vehicle use and competitive events: (1) the area north of I-70 and south of the Book Cliffs from the east branch of 27-1/4 Road (Carpenter Road) east to 32 Road (10,240 acres); (2) a 600-acre area on the east side of 25 Road about 1-1/2 miles north of the Highline Canal, and (3) a 400-acre area on the east side of 18 Road immediately north of where 18 Road crosses the Highline Canal.

Consider competitive events proposed outside of established open area on an individual basis. The intent of permit processing will be to keep most of an event on existing roads and trails (most washes are existing trails) and allow up to 25 percent of the total race mileage cross-country (off existing roads and trails). The rugged, relatively barren zones of exposed mancos shale that are scattered throughout the Grand Valley desert are the areas where cross-country use might be authorized. Monitor competitive events to ensure compliance with permit requirements and to prevent excessive cross-country use from damaging soil structure in any one area. Do not allow competitive use to occur repeatedly in any one area outside of established open areas.

Limit vehicle use in the remainder of the area to existing roads primarily to protect sensitive watershed values. Close the Lands End area (6,400 acres) from December 1 to June 1 to protect big game winter range.

Visual Resources

Manage Mount Garfield (1,280 acres) under visual resource management Class I objectives. Manage the foreground of I-70 (8,320 acres) and U.S. 50 (5,760 acres) and the cliffs adjacent to Mount Garfield (8,240 acres) under visual resource management Class II objectives. Manage the slopes of the Grand Mesa south of Watson Draw (23,040 acres) under visual resource management Class III objectives.

Special Management Areas

Designate the Fruita (280 acres) and Rabbit Valley (40 acres) paleontological sites as research natural areas. Manage the Fruita site primarily for scientific use and the Rabbit Valley site for educational and scientific use. Designate the Badger Wash hydrologic study area and adjacent sensitive

plant area as an area of critical environmental concern (1,520 acres).

Land Tenure

When an application is submitted, work with the Federal Aviation Administration and the Walker Field Airport Authority on the potential airport expansion involving approximately 2,240 acres of public land.

Public Utilities

Identify the Colorado River, Grand Junction municipal watershed, Badger Wash study area, Fruita and Rabbit Valley paleontological sites, Mount Garfield, Skipper's Island, and actively managed archaeological sites as unsuitable for public utilities. Identify threatened and endangered species habitat, scenic values, steep slopes, deer and elk winter range, threatened and endangered species, and known locations of sensitive species as sensitive to public utilities. Identify the remainder of the area as suitable. Designate a major corridor (approximately four miles wide) for power lines from the resource area boundary near De Beque to the southern resource area boundary along Highway 50.

Transportation

Acquire public access at the north end of 29 and 33 Roads north of I-70 for recreation management. Acquire public access on the Mitchell Road for general public use. Acquire public access to the McDonald Creek area to manage cultural resources and provide access to the Colorado River. Acquire trail access on the south end of the Black Ridge trail to provide access to Colorado National Monument and adjacent public land. Close roads that no longer serve their primary purpose and that have relatively little value to multiple use management to protect wildlife. (The highest priority for closure will be roads in critical areas having a good chance of success in closure.)

Fire

Manage portions of this emphasis area (1) to prevent fire related damage to the Hollenbeck Reservoir watershed; or (2) to protect adjacent private property through the prevention of fire spread from public land, protect oil and gas facilities, pumping stations, other improvements, coal outcrops, perennial forage resources, riparian areas, and reduce air quality impacts.

Areas Gd: Emphasis on Land Disposal

Land Disposal

Identify a total of 140 tracts containing approximately 24,998 acres for disposal. Prior to disposal, manage the resources within these tracts as described under this emphasis area. Little, if any, funds will be spent for on-the-ground improvements for resource management on these tracts. Convey mineral estates with the surface where mineral values are not known to exist or where retaining the mineral rights would interfere with or preclude nonmineral development of the land which is a more beneficial use of the land than mineral development (see Federal Land Policy and Management Act Section 209) or where conveyance of the mineral estate is determined to be appropriate for an exchange proposal under *Section 206 of the Federal Land Policy and Management Act*.

Locatable Minerals

Open all potential disposal tracts to mineral location unless previously withdrawn from the general mining laws.

Coal

Identify any potential disposal tracts that are within the potential coal development area as acceptable for further coal leasing consideration.

Oil and Gas

Make available for leasing potential disposal tracts (24,998 acres) with standard lease terms or appropriate stipulations.

Mineral Materials

Identify potential disposal tracts as open to mineral materials sales or free use permits.

Forestry

Allow sawtimber and fuelwood harvesting to continue pending disposal.

Livestock Grazing

Limited management of rangeland would be allowed to occur. Notify permittees 2 years prior to selling grazing lands.

Recreation

Do not manage recreation use in areas identified for disposal.

Off-Road Vehicles

Designate the areas as open to off-road vehicle use; however, continue existing off-road vehicle use restrictions in sensitive areas such as Skipper's Island pending final management determination.

Visual Resources

Do not adopt visual resource management objectives.

Public Utilities

Identify all tracts as sensitive to public utilities. Approve only right-of-way applications that would not unduly depreciate the tracts' appraised values.

Transportation

Acquire no additional access specifically for management of these tracts. Reserve public access across these tracts where it would benefit the public.

Fire

Manage all public land within this emphasis area to protect adjacent private property through the prevention of fire spread from public land.

Area K-1: Emphasis on General Natural Resource Management

Water

Reduce sediment yield on approximately 900 acres in Snyder Canyon.

Locatable Minerals

Close Mud Springs (40 acres) and Miracle Rock (40 acres) recreation sites and the proposed utility corridor (860 acres) to mineral location. Open the remainder of the area except for existing withdrawals.

Oil and Gas

Make available for leasing approximately 91,384 acres with standard lease terms; 2,360 acres with a no surface occupancy stipulation to protect developed campgrounds (Mud Springs and Miracle Rock), two actively managed archaeology sites (Ladder Springs and Sieber Canyon), scenic and natural values (Granite Creek cliffs and canyons), perennial streams, and Black Ridge utility corridor; and 26,976 acres with other stipulations to protect deer and elk winter range, bighorn sheep winter range, scenic and natural values (Granite Creek Canyon benches), campground scenic zones, and threatened and endangered species.

Mineral Materials

Close Mud Springs and Miracle Rock recreation sites (80 acres), cultural sites (335 acres), and the proposed utility corridor (860 acres) to mineral materials sales and free use permits. Open the remainder of the area.

Forestry

Identify approximately 21,573 acres of productive pinyon-juniper woodlands and 317 acres of commercial forest land as suitable for management and harvesting. Identify approximately 673 acres of productive pinyon-juniper woodlands in the Pinyon Mesa area and 40 acres in the Miracle Rock as unsuitable for management and harvesting because of adverse location and recreation, respectively. Design fuelwood sales to meet management objectives for wildlife on big game critical winter range. Limit cutting units on the Glade Creek benches to 20 acres or less.

Wildlife

Manage wildlife habitat primarily for deer, elk, and grouse. Focus wildlife management on decreasing deer and elk winter use in the Dolores triangle and increasing it in emphasis areas A-2 and Dp. Prohibit disturbing activities in deer and elk critical winter ranges from December 1 to May 1 and in elk calving areas from May 15 to June 15. Protect aspen stands and identified calving sites from surface disturbance within the elk calving areas. Within vegetation conversion projects, exclude one-fifth of the area (the 20 percent that produces the most fruit) from the treatment to maintain food for fruit-dependent wildlife. Retain 30 percent of sagebrush manipulation areas in leave strips or untreated patches. Areas reserved from treatment will be selected with flexibility to accommodate feasibility. Maintain woody riparian habitat to favor the tallest plant species native to each site while promoting diversity in plant heights and species. Prohibit surface disturbance within 100 feet of perennial streams, except at necessary stream crossings. Maintain sport fisheries in Bieser, Briar, and Granite Creeks and in the Little Dolores River.

Threatened and Endangered Species

Protect active peregrine falcon nests from surface-disturbing activities from March 15 to July 1. Protect spineless hedgehog cactus habitat. Protect known important habitat sites of sensitive animal and plant species from surface-disturbing activities.

Livestock Grazing

Give special attention to the ecological integrity of riparian areas in the implementation of livestock grazing management plans.

Cultural Resources

Actively manage Sieber Canyon and 5ME1358 archaeological sites as high value sites.

Recreation

Continue to manage Miracle Rock recreation site (40 acres). Expand facilities at the Mud Springs recreation site (40 acres) to accommodate additional group use. Require permits and use fees in this area, as appropriate. Manage approximately 15,600 acres in Granite Creek to provide opportunities for semi-primitive motorized and non-motorized recreation. Include the Granite Creek area in the

Gateway Intensive Recreation Management Area. Manage the remainder of the emphasis area as an extensive recreation management area.

Off-Road Vehicles

Limit vehicle use to existing roads in the Granite Creek area.

Visual Resources

Manage Granite Creek cliffs and canyons (2,240 acres) under visual resource management Class II objectives. Manage the benches above Granite Creek (12,760 acres) under visual resource management Class III objectives.

Public Utilities

Identify a one-quarter mile wide corridor between the Colorado National Monument and the Black Ridge Wilderness Study Area for placement of minor utilities such as waterlines, power lines, and telephone lines. Prohibit roads within this corridor. Identify approximately 26,976 acres as sensitive to public utilities to protect deer and elk winter range, bighorn sheep winter range, and the mesa tops in Granite Creek Canyon. Identify approximately 2,360 acres as unsuitable for public utilities to protect three developed campgrounds, Granite Creek Canyon cliffs, perennial streams, and the three managed archaeological sites.

Transportation

Acquire trail access along the south end of Black Ridge in cooperation with Colorado National Monument. Acquire administrative access to the Crawford Peak communication site and to Snyder Flats North and South and Timber Ridge for forest management. Close roads that no longer serve their primary purpose and that have relatively little value to multiple use management to protect wildlife. (The highest priority for closure will be roads in critical areas having a good chance of success in closure.)

Fire

Manage portions of this emphasis (1) to protect adjacent private property through the prevention of fire spread from public land, protect timber sale areas, and cultural resource structures; (2) to protect improvements such as the Mud Springs and Miracle rock recreation sites; (3) to reduce fire suppression costs and, as a secondary benefit, diversify the

vegetative mosaic in Granite Creek; or (4) to improve forage conditions for livestock in areas to be burned under prescribed conditions.

Area K-2: Emphasis on General Natural Resource Management

Water

Reduce sediment yield from the Calamity and Blue Creek watersheds (3,300 acres) and three unnamed areas adjacent to the Dolores River (18,000 acres). Treat eroding stream channels in Bull Draw (3.3 miles), three tributaries to the Dolores River (6 miles), and Calamity and Blue Creeks (4.6 miles). Continue to study and give priority to the Sinbad salinity control project.

Locatable Minerals

Open the entire area to mineral location except for those areas closed because of existing withdrawals.

Oil and Gas

Continue to close The Palisade Wilderness Study Area to additional leasing based upon congressional appropriations that prohibit leasing in wilderness study areas. Lease the area with stipulations if it is designated as nonwilderness and thus made available for leasing.

Make available for leasing 66,891 acres with standard lease terms; 34,240 acres with a no surface occupancy stipulation to protect scenic and natural values (Sinbad Valley cliffs, The Palisade Outstanding Natural Area, the Dolores River corridor, Unaweep Canyon corridor, and Juanita Arch); and 53,685 acres with other stipulations to protect scenic and natural values (Unaweep valley bottom and Sinbad Valley), steep slopes, perennial streams, deer and elk winter range, and threatened and endangered species.

Mineral Materials

Close approximately 18,000 acres on the Palisade above Gateway, the cliffs of Sinbad Valley, the Dolores River, Unaweep Canyon, Juanita Arch, and Unaweep Seep to mineral materials sales and free use permits.

Forestry

Identify approximately 25,795 acres of productive pinyon-juniper woodlands and 252 acres of commercial forest land as suitable for management and harvesting. Identify approximately 2,865 acres of productive pinyon-juniper woodlands in the John Brown area and 857 acres in The Palisade as unsuitable for management and harvesting because of adverse locations. Design fuelwood sales to benefit wildlife in critical winter range. Limit cutting units in The Palisade Outstanding Natural Area to 20 acres or less in the pinyon-juniper woodlands with primary emphasis on protecting natural and scenic values; rehabilitate all new roads following logical development to make them blend in with the characteristic landscape and to not be evident to the casual observer.

Wildlife

Manage wildlife habitat primarily for deer, elk, and turkey. Focus wildlife management on dispersing the big game winter use more evenly between Blue Mesa and Tenderfoot Mesa. Provide habitat for increasing the deer herd from 14 to 30 per square mile in that winter range. Provide habitat on this side of the Uncompahgre Plateau for the rehabilitation of the wild turkey population. Prohibit disturbing activities in deer and elk critical winter ranges from December 1 to May 1. Within vegetation conversion projects, exclude one-fifth of the area (the 20 percent that produces the most fruit) from the treatment to maintain food for fruit-dependent wildlife. Retain 30 percent of sagebrush manipulation areas in leave strips or untreated patches. Areas reserved from treatment will be selected with flexibility to accommodate feasibility. Maintain woody riparian habitat to favor the tallest plant species native to each site while promoting diversity in plant heights and species. Prohibit surface disturbance within 100 feet of perennial streams, except at necessary stream crossings. Maintain sport fisheries on Lobe, West, North, Ute, Blue, Calamity, and North Fork of Mesa Creeks. Continue to manage the Unaweep Seep Research Natural Area as outlined in the habitat management plan.

Threatened and Endangered Species

Identify approximately 28,000 acres (much of it overlapping) of bald eagle and peregrine falcon habitat for active management and protection. Provide suitable habitat for the reintroduction of peregrine falcons in cooperation with the Colorado Division of Wildlife and U.S. Fish and Wildlife Service. Protect bald eagle concentration areas from surface-disturbing activities from December 1 to April 1. Protect active peregrine falcon nests from surface-disturbing activities from March 15 to July 1. Protect known important

habitat sites of sensitive animal and plant species and communities from surface-disturbing activities.

Livestock Grazing

Give special attention to the ecological integrity of riparian areas in the implementation of livestock grazing management plans.

Cultural Resources

Actively manage the Sinbad Valley historical area as a high value historical site area.

Recreation

Manage the Dolores River Canyon to provide for recreation use (primarily for floatboating, highway oriented sightseeing, and hiking) and protection of natural values. Require permits for all commercial floatboating use. Identify Sinbad Valley, The Palisade Outstanding Natural Area (ONA), the Granite Creek area, the Dolores River corridor, and Unaweep Canyon (including Northwest Creek) as the Gateway Intensive Recreation Management Area (41,000 acres) and manage the area to provide for semi-primitive motorized and non-motorized recreation opportunities.

Off-Road Vehicles

Close the cliffs of Sinbad Valley (1,920 acres), The Palisade (1,920 acres within The Palisade Outstanding Natural Area), and Unaweep Seep Research Natural Area (37 acres) to vehicle use. Limit use on the remainder of The Palisade Outstanding Natural Area (17,258 acres) to designated roads and trails. Close any new industry roads in The Palisade Outstanding Natural Area to public use to protect natural and scenic values. Close Blue Mesa to vehicle use from December 1 to May 1 (3,200 acres) to protect deer on critical winter range. Limit vehicle use in the remainder of the area to existing roads.

Visual Resources

Manage the cliffs in Sinbad Valley (1,920 acres) and The Palisade (1,920 acres within The Palisade Outstanding Natural Area) under visual resource management Class I objectives. Manage the Dolores River corridor (16,000 acres), the cliffs of Unaweep Canyon (14,080 acres including Northwest Creek), and Juanita Arch (40 acres) under visual resource management Class II objectives. Manage the Sinbad

Valley bottom and Unaweep Canyon bottom (8,960 acres) under visual resource management Class III objectives. In the Palisade Outstanding Natural Area, the roads are the critical viewpoints.

Wilderness

Recommend The Palisade Wilderness Study Area as unsuitable for wilderness. Following release by Congress, manage the area as an outstanding natural area (19,178 acres) as described for this emphasis area.

Special Management Areas

Designate The Palisade (19,178 acres) an outstanding natural area to protect its natural, geologic and scenic values. Close The Palisade itself to off-road vehicle use. In the remainder of the area, limit vehicle use to existing roads. Manage the rocky spine called "The Palisade" as a visual resource management Class I while managing the remainder of the outstanding natural area as visual resource management Class II. Emphasize protection of the natural and scenic values of the outstanding natural area. Provide for semi-primitive motorized and non-motorized recreation opportunities in the outstanding natural area consistent with the protection of natural values. Continue to designate Unaweep Seep (37 acres) a research natural area to protect rare butterfly habitat.

Public Utilities

Identify the Unaweep Seep, The Palisade Outstanding Natural Area, the cliffs of Sinbad Valley, and Juanita Arch (34,240 acres) as unsuitable for public utilities. Identify the valley bottoms of Unaweep Canyon and Sinbad Valley, perennial streams, threatened and endangered species habitat, known locations of sensitive plants, slopes greater than 40 percent, the Dolores River corridor, and deer and elk winter range (53,685 acres) as sensitive to public utilities. Identify the remainder of the area as suitable. Designate a half-mile wide corridor along the Unaweep Canyon road for telephone and small electrical distribution lines.

Transportation

Acquire or develop trail access into Bull Draw (.25 mile) for recreation management. Acquire administrative access on the Snyder Flats North access for forest management. Close roads that no longer serve their primary purpose and that have relatively little value to multiple use management to protect wildlife. (The highest priority for closure will

be roads in critical areas having a good chance of success in closure.)

Fire

Manage portions of this emphasis area (1) to protect the area surrounding the Unawep Seep to reduce equipment damage to resources found within the Unawep Seep Research Natural Area; (2) to minimize potential soil erosion

following severe wildfires on steep slopes, protect mining facilities, cultural resource structures, fuelwood sale areas, riparian areas, and tall conifers; (3) to improve forage conditions for livestock in areas to be burned under prescribed conditions, or (4) to reduce fire suppression costs and, as a secondary benefit, diversify the natural vegetative mosaic in Unawep Canyon, The Palisade Outstanding Natural Area, and Sinbad Valley.

CHAPTER 3

PUBLIC PARTICIPATION AND LIST OF PREPARERS

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PUBLIC PARTICIPATION

Throughout the planning process, concerns and interests of all publics were addressed in a variety of public participation activities. The area manager and resource management plan (RMP) team members met frequently with county commissioners, environmental groups, the district advisory council and grazing board, and concerned citizens.

In December 1982, a notice of intent to publish an environmental impact statement (EIS) was published in the *Federal Register*. This notice began the planning process. Invitations to participate in the planning process were sent to nearly 1,000 individuals, organizations, agencies, special interest groups, and the general public. The letter outlined the planning process and listed BLM staff specialists assigned to the planning team and their respective area of expertise.

A series of public scoping meetings was held in February 1983 in Grand Junction and Denver. The purpose of the meetings was to explain the objectives and goals of the RMP and identify resource management issues. More than 450 issue statements were received either by mail or at scoping meetings.

The first RMP newsletter was published in June 1983. It was mailed to about 500 persons who requested information on the planning process. Subsequent newsletters were mailed out in November 1983, October 1984, and May 1986.

Changes in the RMP planning criteria required an additional public comment period in November 1984. Proposed changes in criteria for land tenure adjustments, coal and public utilities, with short rationale for each, were published in the *Federal Register* and described in a fact sheet.

The draft RMP EIS was published in March 1985. A 90-day public comment period extended from April 3 to July 17, 1985. During that period, official public hearings were held in Grand Junction, Gateway, Delta, and Denver, Colorado, at which 38 individuals testified. Also, 92 letters commenting on the draft were received. The testimony and letters generated over 300 specific comments which required responses and resulted in numerous changes to the draft RMP EIS.

In November 1985, the final RMP EIS was published and mailed to approximately 900 individuals, organizations, or federal, state, and local agencies. A 30-day protest period extended from November 16 to December 15, 1985. During that period, six official protests on the proposed RMP were

filed. These protests were resolved prior to publication of this document.

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APPENDIX A POSSIBLE MANAGEMENT PRACTICES

Table A-1. A list of possible practices that could be used to manage water resources in the future. The practices are listed in two columns: "Possible Practices" and "Possible Outcomes".

POSSIBLE PRACTICES	POSSIBLE OUTCOMES
1. Implement water conservation programs in homes and businesses.	Reduced water consumption, lower water bills, and increased water availability.
2. Implement water conservation programs in schools and universities.	Reduced water consumption, lower water bills, and increased water availability.
3. Implement water conservation programs in government buildings.	Reduced water consumption, lower water bills, and increased water availability.

APPENDIXES

1. Implement water conservation programs in homes and businesses.	Reduced water consumption, lower water bills, and increased water availability.
2. Implement water conservation programs in schools and universities.	Reduced water consumption, lower water bills, and increased water availability.
3. Implement water conservation programs in government buildings.	Reduced water consumption, lower water bills, and increased water availability.
4. Implement water conservation programs in commercial buildings.	Reduced water consumption, lower water bills, and increased water availability.
5. Implement water conservation programs in industrial facilities.	Reduced water consumption, lower water bills, and increased water availability.
6. Implement water conservation programs in agricultural operations.	Reduced water consumption, lower water bills, and increased water availability.
7. Implement water conservation programs in public works departments.	Reduced water consumption, lower water bills, and increased water availability.
8. Implement water conservation programs in law enforcement agencies.	Reduced water consumption, lower water bills, and increased water availability.
9. Implement water conservation programs in fire departments.	Reduced water consumption, lower water bills, and increased water availability.
10. Implement water conservation programs in health care facilities.	Reduced water consumption, lower water bills, and increased water availability.

APPENDIX A

POSSIBLE MANAGEMENT PRACTICES

Following are lists of possible practices that could be used in the management of the various resources. These lists should not be considered comprehensive lists of all management practices.

WATER RESOURCES

Alternative water source development
Brush control
Buffer strips adjacent to perennial streams
Check dams
Contour furrows and trenches
Detention dams
Development with mitigation measures
Dikes
Fencing
Firebreaks
Flood water control structures
Flood plain development restrictions
Grazing land mechanical treatments
Gully plugs
Livestock exclusion
No development
Planned grazing systems
Pond sealing or lining
Range seeding
Rehabilitation of disturbed areas
Rehabilitation or improvement of wetland areas
Retention structures
Riparian area development restrictions
Siting considerations
Spring development
Stream channel stabilization
Streambank protection
Tree planting
Trough or tank installation
Waterspreading

Wildlife upland habitat management
Wildlife watering facilities
Woodland improved harvesting

FOREST MANAGEMENT PRACTICES

Commercial Forest Land Species

Spruce-Fir

Clearcutting
Shelterwood/group selection cutting

Douglas-Fir

Clearcutting
Shelterwood/selection cutting

Aspen

Clearcutting

Ponderosa Pine

Shelterwood/selection cutting

Woodland Species

Pinyon-Juniper

Selection cutting
Seed tree cutting
Clearcutting

WILDLIFE HABITAT IMPROVEMENT PRACTICES

Terrestrial Wildlife

Vegetation Manipulation from Typically Least to Most Disturbing

Note: Information in parentheses indicates the vegetation type most commonly associated with the form of manipulation.

Seeding (follows other treatment with frequent exceptions; e.g., burning, brush beating, or injected without major vegetation reduction)

Hand-thinning (woodland, forest)

Prescribed livestock grazing (grassland)

Brush beating (sagebrush, snowberry)

Herbicide spraying (all types, is least favored treatment)

Controlled burning (mountain shrub, sagebrush)

Hula dozing (pinyon-juniper)

Chaining (pinyon-juniper)

Disc-plowing (sagebrush, greasewood)

Water Development (usually associated with pipes and tanks to divert and retain the water)

Springbox

Water well

Guzzler (small water catchment)

Retention dam

Livestock water site modification

Cover Augmentation

Brush piles

Special food/cover plantings

Nest boxes/platforms

Snag creation

Structural Design Safety

Fence height, strand separation, visibility, and pass structures

Power line location, wire separation and visibility

Road location, shoulder vegetation, pass structures, and closures

Aquatic Wildlife

Minimum stream flows (habitat volume and temperature maintenance)

Current deflectors (bank stability, spawning area creation)

Check dams (pools for resting, sediment control)

Streambank vegetation protection (shade, bank stability)

Fish screens (protection from irrigation ditch entrapment)

Rough fish removal (prior to fish stocking—CDOW procedure)

Fish shelters (visual and water velocity cover, shade)

APPENDIX B

STANDARD DESIGN PRACTICES

Appendix B is a revision of the standard design practices (SDPs) presented in both the draft and final environmental impact statements (EISs). Appendix B, which was labeled Appendix C in the draft EIS, was reorganized and refined to eliminate redundancy, clarify language, increase its usefulness, and facilitate implementation of decisions.

SDPs are design features, reclamation measures, and procedures that may be applied to projects proposed by BLM, other federal, state and local agencies, or private industry. SDPs will be used to satisfy requirements of law for protection of resource values and/or to achieve goals in this plan.

The SDPs listed in this appendix are not all inclusive. That is, practices other than those included here may also be applied to proposed projects if they are consistent with goals in this plan. The listing is arranged by the type of action to which an SDP would be applied.

SDPs are flexible and negotiable. That means they may be applied, waived, or altered at the discretion of the resource area manager. SDPs may be reworded or changed to fit a particular project. SDPs for a particular project will be selected in consultation with the project initiator. Only those SDPs applicable to a given project will be selected. If more than one SDP will achieve a desired result, the least costly SDP will be selected.

STANDARD DESIGN PRACTICES FOR ALL PROPOSALS

1. No surface-disturbing activities shall be allowed on the following lands in order to protect sensitive resources: (list the areas). (NOTE: This SDP will be applied in the following areas identified in this plan.)
 - a. Lands with 40 percent slope or greater.
 - b. Unstable and slumping soils in the areas of Baxter Pass, Douglas Pass, and Plateau Creek.
 - c. Badger Wash hydrologic study area.
 - d. Grand Junction municipal watershed.
 - e. Indian Wash dam.
 - f. Areas of critical environmental concern (Unaweep Seep RNA, Pyramid Rock RNA, Gunnison Gravels RNA, Rough Canyon RNA, Fruita Paleontological Site RNA, Rabbit Valley paleontological site RNA, and The Palisade ONA.
 - g. Class I and II visual resource management areas (Juanita Arch, The Goblins, Ruby Canyon, Dolores River corridor, Gunnison River corridor, Mount Garfield cliffs, Bang's Canyon cliffs, Sinbad Valley cliffs, Granite Creek cliffs, Unaweep Canyon cliffs, Hunter/Garvey Canyons cliffs, and the Vega Reservoir viewshed).
 - h. Actively-managed cultural resource sites (Indian Creek, Rough Canyon, Cactus Park, Sieber Canyon, McDonald Creek, SME1358, and Ladder Springs).
 - i. Skipper's Island and Rough Canyon wildlife habitat areas.
 - j. Developed recreation sites (Mud Springs, Miracle Rock, Dominguez, The Falls, Island Acres, Vega Reservoir, and Highline Reservoir).
 - k. Black Ridge utility corridor.
 - l. Lands within 100 feet of perennial streams, except for essential roads and utility crossings.
 - m. Elk calving sites.
 - n. Critically-eroding soils (Cactus Park).
 - o. Riparian areas.
2. Special design and reclamation measures may be required to protect the outstanding scenic and natural landscape values of (identify the resource and area) located on the following portions of this lease (legal description). Special design and reclamation measures may include transplanting trees and shrubs, fertilization, mulching, special erosion control structures, irrigation, site recontouring to match the original contour, buried tanks and low profile equipment, and painting to minimize visual contrasts. Surface-disturbing activities may be denied in sensitive areas, such as unique geologic features and rock formations, visually prominent areas, and high recreation use areas. (NOTE: This SDP will be applied in the following VRM Class III areas identified in this plan.)
 - a. Gunnison River corridor valley bottoms and benches.
 - b. South Shale Ridge.
 - c. Grand Mesa slopes.
 - d. Bang's Canyon benches and mesa tops.
 - e. Sinbad Valley, valley floor, benches.
 - f. Granite Creek benches and mesa tops.
 - g. Unaweep Canyon valley bottoms.

- h. Hunter/Garvey Canyons benches and mesa tops.
 - i. Face of the Book Cliffs.
 - j. Highway corridors (I-70, 50, 139, 141, and Baxter Pass road).
 - k. Little Book Cliffs Wild Horse Range.
 - l. BLM campground viewshed (Mud Springs, Miracle Rock, and Dominguez).
3. All proposed activities will avoid interference with the Palisade municipal watershed and Jerry Creek Reservoirs' watershed. This may include the relocation of proposed uses, facilities, or application of appropriate mitigation measures.
 4. The Grand Junction Resource Area Manager will be notified at least 24 hours prior to commencing reclamation work, construction, or maintenance activities.
 5. All construction activities shall be confined to the minimum area necessary. The exterior boundaries of the construction area shall be clearly flagged prior to any surface-disturbing activities.
 6. Prior to cutting any fence along a right-of-way, the fence shall be firmly braced and tied to prevent slacking of the wire. All braces shall be permanent H-frame construction. Upon completion of construction, the grantee shall rebuild and maintain the fence in accordance with BLM standards.
 7. An H-20 cattle guard, base, and adjacent gate will be installed. The guard will be constructed to the specifications of BLM drawing number 02457-4, and the base will be constructed to the specification of BLM drawing number 02457-1, 2, or 3.
 8. The constructor shall clear all vegetation from the project area, where clearing is necessary, prior to any construction. All clearing work shall be completed without mixing soil with the vegetation.
 9. All trees requiring removal shall be disposed of by the grantee. Where earth blading is required, stumps shall be removed and scattered or buried in an area designated by the authorized officer. Where earth blading is not required, stump height shall not exceed 12 inches. All slash less than 4 inches in diameter will be chipped, scattered outside the cleared area, or stockpiled for use during reclamation as directed by the authorized officer. All material 4 inches in diameter and greater will be removed from federal land unless otherwise directed. A wood permit from BLM for the wood removed will be required prior to any clearing.
 10. All above-ground facilities shall be painted to blend with the surrounding area.
 11. Backslopes shall be constructed no steeper than (as specified, ranging from 1-1/2:1 to 3:1, run:rise). Round the upper edges of all cutbanks.
 12. Trash will be confined in a covered container while the project is in progress. Upon completion, all trash, flagging, laths, etc., will be removed and hauled to an authorized disposal site. No oil or lubricants shall be drained onto the ground surface.
 13. Drainages shall not be blocked or filled with loose dirt or debris. All drainage crossings shall be properly excavated and/or have a culvert of sufficient size installed to adequately carry the flow of a 25-year flood.
 14. All soil erosion associated with the operation must be stabilized to a condition at least equal to that present before disturbance.
 15. For projects requiring long term surface occupancy (producing wells, facility sites, permanent roads, etc.), access roads will be upgraded and maintained as necessary to prevent soil erosion and accommodate year round traffic; all disturbed areas unnecessary to operations will be stabilized, and all disturbed areas outside the work area will be seeded according to the BLM approved seed mixture. For projects requiring short-term surface occupancy, or abandoned projects (dry wells, pipelines) all disturbed areas will be stabilized and seeded according to the BLM approved seed mixture; all compacted areas will be ripped or disked prior to seeding.
 16. All disturbed areas will be seeded with the seed formula approved by the Grand Junction Resource Area Manager. A seedbed will be prepared by contour cultivating 4 to 6 inches deep where possible. Drill seed 1/4 to 1/2 inch deep. In areas that cannot be drill seeded, broadcast seed using one and one-half times the recommended drilling rate and cover 1/4 to 1/2 inch deep using a harrow, drag bar, or chain. Seeding must be completed after August 15 and prior to October 1 above 6,500 feet elevation and after September 1 and prior to October 15 below 6,500 feet elevation. Seeding of disturbed areas is required wherever the level of disturbance has resulted in significant vegetation losses. Disturbed areas will be considered satisfactorily revegetated when the percent vegetative cover at least equals the cover present prior to disturbance and the plant species composition is at least as desirable as that present prior to disturbance.
 17. Existing roads will be used wherever possible. Additional roads shall be kept to the minimum. Route locations must be approved by BLM prior to construction.
 18. For small culverts (less than 36 inches in diameter): All fill material will be placed in layers not exceeding 6 inches. Fill material will be compacted with a hand compactor 12 inches on both sides and above the culvert. Fill outside of the 12-inch limit shall be placed in 6-inch lifts or less and compacted with a rubber-tired vehicle or using other standard compaction methods.

19. Prior to installation of large culverts (more than 36 inches in diameter) existing material will be removed to a depth two feet below the natural streambed. This material shall be replaced with a well graded 3/4 inch minus material. On each side of the culvert there will be an area of 3/4 inch minus material at least three feet wide or the width of the streambed, whichever is greater. The total depth of the 3/4 inch minus material must cover the diameter of the pipe plus one foot. All fill will meet the following compaction standards:
 - a. A gradation curve and proctor analysis for the 3/4 inch minus fill and a proctor analysis on the native fill will be supplied to the BLM prior to any construction on the drainage crossing.
 - b. All fill material will be placed in layers not exceeding six inches.
 - c. Compaction will be 95 percent of maximum density as identified by the proctor analysis.
 - d. The compaction will be tested after the placement of each six-inch layer as per A.A.S.H.T.O. T.99 method C or D.
 - e. A BLM engineering representative will conduct the compaction testing if time is available or the operator may acquire the appropriate tests from a certified professional engineer.
20. Culvert invert(s) shall be installed at the elevation of the natural streambed. The up and down stream fill slopes will be ripped with a well graded mixture of rock sizes containing no material greater than 2 feet or smaller than 3 inches. The ratio of maximum to minimum dimension of any rock shall not exceed 6:1.
21. When blasting is necessary, the following precautions will be used:
 - a. In areas of human use, blasting blankets will be used.
 - b. Landowners or tenants in close proximity to the blasting will be notified in advance of the blasting so that livestock and other property can be adequately protected.
 - c. Access to the blasting area will be restricted by construction personnel stationed at each end of the area to be blasted.
 - d. Blasting within 1/8 mile of federally-owned or controlled springs and flowing water wells must be approved in writing by the area manager.
 - e. No blasting will be permitted within 1/4 mile of historic trails, natural areas, identified archaeological sites, and recreation areas.
 - f. Powder magazines will be located out of sight or at least 1/2 mile from roads. Loaded shot holes will not be left unattended. Approval from the area manager will be obtained for the magazine locations.
22. Where practical, known important habitat sites of sensitive animal and plant species and communities will be protected from surface-disturbing activities.
23. A pesticide use proposal must be submitted and approved by the authorized officer prior to the use of any pesticides.
24. Low water crossings will be used during road construction across drainages whenever possible.
25. (Fill in depth) inches of topsoil will be stripped and stockpiled. Stockpiled topsoil will be evenly distributed over the disturbed area prior to seeding. No topsoil stripping will be allowed when soils are moisture saturated or frozen deeper than the depth to be stripped.
26. All disturbed areas will be contoured to blend with the natural topography. Blending is defined as reducing form, line, and color contrast associated with the surface disturbance so that the project area will fit into the natural landscape as much as possible. In visually sensitive areas and wilderness study areas, all disturbed areas will be contoured to match the original topography. Matching is defined as reproducing the original topography of the disturbed area and eliminating form, line, and color contrast as much as possible.
27. Roads will be constructed and maintained to BLM road standards (BLM Manual Section 9113). All vehicle travel will be within the approved driving surface.
28. During periods critical to bighorn sheep, deer, elk, and wild horses, the following restrictions will be applied: (1) No new construction activities will occur; (2) All activities will be conducted during daylight hours only; (3) Vehicular access on a daily basis will be limited to a single trip. Critical periods are as follows:
 - a. Bighorn winter range — December 1 to May 1
 - b. Deer and elk winter range — December 1 to May 1
 - c. Elk calving — May 15 to June 15
 - d. Wild horse winter range — December 1 to May 1
 - e. Wild horse foaling — March 1 to July 1
29. On sites where the ability to achieve acceptable reclamation is reduced because the existing topsoil has been lost or mixed with less desirable material during the course of the project, enough good quality topsoil to cover the disturbed area (specify depth in inches) will be hauled in and distributed. This will be applied only to visually sensitive areas and WSAs.
30. The amount of rock greater than 2 inches in diameter present in the upper 6 inches of the replaced topsoil will not exceed the amount present prior to disturbance. Excess rock must be removed to an approved disposal site.

31. In areas where ground water contamination may be a problem, all sewage and human waste will be removed from the site and taken to an approved disposal facility. Bore hole disposal may be used where contamination is not a problem. Bore holes must be fenced or covered at all times to eliminate safety hazards.
32. Where woodland or forest vegetation was present prior to disturbance, tree species will be reestablished. Pinyon and juniper will be included in the seed mixture; Douglas-fir and ponderosa pine seedlings will be planted as directed by the authorized officer.

STANDARD DESIGN PRACTICES FOR FORESTRY PROJECTS

1. Timber and fuelwood sales will be prohibited in riparian areas.
2. The closure of new roads will be considered and planned for during sale preparation in accordance with existing policy.
3. Small clear cuts will be considered for use in the pinyon-juniper and aspen types in critical big game winter ranges and other areas where economically feasible.
4. Cuts will maximize the length of edge per amount of area considering natural and man made boundaries.
5. No point within an opened stand will be more than 200 yards from cover.
6. The removal of cover along edges of existing openings (foraging areas) in the pinyon-juniper and aspen types will be discouraged.
7. Cuts that thin the pinyon-juniper canopy cover to 20 percent or less will be favored for use in bighorn sheep ranges.
8. Large coniferous seed trees (three to seven trees per acre) will be left where practical as wildlife shelter on south facing slopes of big game winter ranges to ensure the succession of quality snags.
9. An average of 3 to 7 trees per acre of the largest nonhazardous snags, particularly those adjacent to openings and open water will be left on commercial sale areas.
10. Sale areas with less than a 15 percent ground cover in the understory on critical deer and elk winter ranges will be seeded using with a mixture of grasses, forbs and shrubs and will be paid for with wildlife funds.
11. Slash will not be burned in the pinyon-juniper and aspen types.
12. A minimum 180 year rotation will be allowed for pinyon-juniper stands. Other species will be managed on a rotation of sufficient length to produce cavity trees for flickers and small owls.

13. Clear cuts will be discouraged in small, isolated tall conifer stands under 160 acres in size.
14. Cavity rich portions of aspen stands will be reserved from cutting.

STANDARD DESIGN PRACTICES FOR PIPELINE PROJECTS

1. A preconstruction field conference shall be requested by the grantee at least five working days prior to any construction activities unless otherwise agreed upon by the authorized officer.
2. Once the pipeline is constructed, the grantee/operator shall restore the existing roadway to meet or exceed conditions prior to construction. The preconstruction width of the driving surface shall also be restored and erosion control structure installed subject to approval of the authorized officer. The grantee/operator shall be responsible for road maintenance from the beginning to completion of operations. This may include, but not be limited to, blading the roadway, cleaning ditches and drainage facilities, dust abatement, or other requirements as directed by the authorized officer.
3. Construction width shall include the existing road. The pipeline shall be located 2 to 3 feet from the edge of the ditch along the existing road. The existing road shall be on the working side of the trench.
4. The pipeline will be buried to provide a minimum cover of 36 inches through normal terrain. The pipeline will be buried deep enough to avoid problems with irrigation ditches, canals, potential irrigation areas and existing pipelines, as designated by the authorized officer. In rocky areas, a minimum cover of 24 inches will be provided. In areas adjacent to or crossing access roads, the pipeline shall be buried with a minimum of 4 feet of cover in alluvial areas and 3 feet of cover in rocky areas.
5. The grantee shall accomplish the crossing of the pipeline owned by (company name) in accordance with an agreement between that company and the grantee/operator.
6. The grantee shall construct water bars or kicker dikes, on all of the rights-of-way, as directed by the authorized officer. The water bars or dikes shall be constructed across the full width of the disturbed area.
7. Pipeline location warning signs shall be installed within five days of construction completion. Each sign shall be permanently marked with the right-of-way serial number.

STANDARD DESIGN PRACTICES FOR OIL AND GAS DRILLING PROJECTS

1. There shall be no deviation from the proposed drilling and/or workover program as approved. All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. Pressure tests are required before drilling out from under all casing strings set and cemented in place. Blowout preventer controls must be installed prior to drilling out the surface shoe and prior to starting workover or completion operations. Preventers will be inspected and operated at least daily to insure good mechanical working order. This inspection will be recorded on the daily drilling report. Preventers will be pressure tested before drilling out from below each casing string. All BOP pressure tests must be recorded on the daily drilling report.
2. If air drilling, the operator shall control blooie line discharge dust by use of water injection or any other acceptable method. The blooie line discharge shall be a minimum of 125 feet from the well head and be directed into the blooie pit in such a manner as to allow containment of drill bit cuttings and waste in blooie pit.
3. If a tank battery is constructed on this lease, it must be surrounded by a fire wall of sufficient capacity to adequately contain the storage capacity of the battery.
4. Plugging Standards:
 - a. Open Hole. A cement plug shall be placed to extend at least from 50 feet below the bottom (except as limited by total depth (TD) or plugged back total depth (PBSD)) to 50 feet above the top of (1) any zones encountered during drilling which contain fluid with a potential to migrate; (2) lost circulation zones; and (3) any potentially valuable minerals, including noncommercial hydrocarbons, coal, and oil shale. Extremely thick sections may be secured by placing 100-foot plugs across the top and bottom of the formation. Lost circulation zones may require alternate methods. In absence of productive zones or minerals which otherwise require placement of cement plugs, long section of open hole should be placed across in-gauge sections of the hole.
 - b. Cased Hole. A cement plug shall be placed opposite all open, perforations and extend a minimum of 50 feet below (except as limited by TD or PBSD) to 50 feet above the perforated interval. In lieu of the cement plug, a bridge plug is acceptable, provided (1) the plug is set as close as practical above the open perforations; (2) the perforations are isolated from any open hole below; and (3) the plug is capped — if cap is placed through tubing, a minimum of 25 sacks of cement but not less than 50 feet of fill-up is required; if placed by bailer, a minimum of 35 feet of fill-up is needed (no volume minimum). If production casing is cut and recovered, a cement plug shall be placed to extend at least 50 feet above and below the stub. An additional cement plug shall be laced to extend a minimum of 50 feet above and below the shoe of the surface casing (or intermediate string, as appropriate). The exposed hole resulting from the casing removal must be secured as required above.
 - c. Annular Space. No annular space that extends to the surface shall be left open to the drilled hole below. If this condition exists, a minimum of the top 100 feet of annulus shall be plugged with cement.
 - d. Testing. The first plug below the surface plug shall generally be tested by either tagging the plug with the working pipe string or pressuring to a minimum pump (surface) pressure of 1000 psig with no more than a 10 percent drop during a 15-minute period (cased hole only). If the integrity of any other plug is questioned, it must be tested in the same manner. Also, any cement plug that is the only isolating medium for a fresh water interval or a zone containing a valuable mineral deposit should be tested by tagging with the drill string. Tagging the first plug below the surface plug will not be necessary where water flows or valuable mineral deposits have not been encountered.
 - e. Surface Plug. A cement plug of at least 50 feet (but not less than 25 sacks of cement) shall be placed in the smallest casing that extends to the surface. The top of this plug shall be placed as near the eventual casing cut-off point as possible.
 - f. Mud. Each of the intervals between the plugs shall be filled with mud of sufficient density to exert hydrostatic pressure exceeding the greatest formation pressure encountered while drilling such interval. In the absence of other information at the time plugging is approved, a minimum mud weight of 9 pounds per gallon shall be specified.
 - g. Surface Cap. All casing shall be cut off at the base of the cellar or 3 feet below final restored ground level (whichever is deeper; the casing shall be filled from the cement plug to the surface with suitable material (cement, sand, gravel, etc.). The well bore must then be covered with a metal plate at least 1/4 inch thick, welded in place, or a cement cap extending at least 12 inches beyond the largest diameter pipe and at least 4 inches thick.
5. All oil will be immediately removed from the surface of reserve pits.
6. The reserve pit will be fenced on three sides prior to drilling activity and closed off on the fourth side after drilling is finished. All corners will be braced with an H-type brace. The fence construction will be on

cut or undisturbed surface. Within the wild horse range, the reserve pit fence shall be 84 inches high. The bottom 48 inches will be woven wire and the top 36 inches will be three strands of barbed wire. In all other areas, the reserve pit fence shall be four strands of barbed wire and will be no closer than four feet to the top of the reserve pit slopes.

7. For dry holes in wilderness study areas (WSAs), reserve pit fluids and/or mud will be removed and taken to an approved disposal facility within 60 days after a well is drilled. Pits will be filled and recontoured within 90 days after a well is drilled.
8. Any hazardous wastes will be removed immediately after drilling and disposed of in a manner approved by the Environmental Protection Agency.
9. Reserve pits will be allowed to dry through natural evaporation for up to 1 year after the well is drilled. If a pit has not dried by the end of this period, all remaining fluids and/or mud must be removed and disposed of in an approved manner. The pit must be filled and recontoured within 15 months after the well is drilled.
10. The reserve pit will be constructed so that leaking or breaching problems are minimized and reclamation potential is maximized. At least 50 percent of the pit capacity should be in cut material. When fractured rock or porous materials are encountered, the reserve pit will be lined with bentonite or an impermeable membrane to prevent leakage. Pits will be allowed to dry before backfilling.
11. A full column of cement shall be placed from a depth of 3,000 feet to the surface in order to ensure adequate protection of any coal beds or fresh water aquifers which may be encountered.

Should it be determined that coal beds or fresh water aquifers are of such depth and/or extent to make it impractical or uneconomical to set the full amount of surface and/or production casing to comply fully with the above cementing requirement, the operator can request verbal approval to stage cement the production casing so a solid cement plug will extend from 50 feet above to 50 feet below each coal bed or fresh water aquifer encountered below the surface casing. The operator may request approval for other acceptable methods of protection.

Should it be determined that there are no coal beds or fresh water aquifers requiring protection, the operator can request verbal approval to waive the cement requirement.

A verbal waiver or modification must be documented by the operator through the filing of a Sundry Notice showing the modified program approved. Where desired by the operator, geologic documentation may be provided for a blanket modification in a given field or area.

12. For dry holes in visually sensitive areas and wilderness study areas, the abandonment marker must be at least 4-inch diameter pipe, buried at least 3 feet deep, and embedded in cement. The pipe must be capped with a steel plate at the surface. The plate must be a minimum of 1/4-inch thick with a surface area less than 2 feet by 2 feet and have rounded corners. The plate must have the identity and location permanently inscribed. The marker should be placed as directly over the original well as possible.

For all other areas, the marker must be at least 4-inch pipe, 10 feet long with 4 feet above ground and embedded in cement. The pipe must be capped and the well identified and location permanently inscribed. The monument should be placed directly over or as near directly over the original well bore as possible.

STANDARD DESIGN PRACTICES FOR GEOPHYSICAL EXPLORA- TION PROJECTS

1. The operator will furnish a map with the Notice of Intent showing approximate line to be used. A map will also be filed with the Notice of Completion showing the completed line. The map will be of a minimum scale of 1/2 inch equals 1 mile.
2. Rehabilitation of disturbed areas is to be done concurrent with the geophysical operations.
3. Blasting or vibrating within 1/8 mile of federally-owned or controlled springs and flowing water wells or cultural resource sites must be approved in writing by the area manager.
4. The operator will avoid any operations when the ground is wet. The area manager may prohibit exploration, drilling, or other activities during wet or heavy snow periods.
5. Plugging of drill holes will conform to the Colorado Reclamation Standards Abandoned Drill Holes Act. Drill hole cuttings will be returned to the hole.
6. No blading or other dirt work will be allowed without written permission from the area manager.

STANDARD DESIGN PRACTICES FOR COAL EXPLORATION

1. All drill holes must be plugged with cement through the underground minable coal beds and aquifers for a distance of at least 50 feet above and below the coal beds and aquifers.

2. Holes may be plugged with a mud conditioner subject to the following:
 - a. Drill holes encountering aquifers having artesian flow shall be plugged from bottom to top with a neat cement slurry or, at a minimum, be cemented across to a minimum of 50 feet on either side of the aquifer.
 - b. Other drill holes not plugged with cement shall be plugged with abandonment mud having a 10-second API gel strength of at least 20 pounds per 100 square feet and a filtrate volume not to exceed 13.5 cc, as determined by accepted procedures. The abandonment mud mix shall have a Marsh Funnel viscosity of at least 20 seconds per quart greater than that of the drilling fluid or at least 55 seconds Marsh Funnel viscosity.
3. All drill holes shall be plugged at the surface with a minimum of 5 feet of cement.
4. Holes must be plugged as soon after drilling as possible.
5. Any hole proposed for ground water monitoring must be completed and cemented so as to isolate all aquifer intervals which show significant head differences or changes in water quality in order to prevent mixing of unlike waters. Movable coal beds likewise must be isolated by casing and cement.
6. All drill fluid, foam, cuttings, and water must be contained on the drill site. Portable pits may be used; however, earth pits will be required if large volumes of fluid are encountered. Pits will be pumped out or allowed to dry completely before backfilling. Drill cuttings not returned to the hole shall be buried, hauled away, or scattered in a thin layer so they do not inhibit plant growth.
2. Holder shall coordinate with the authorized officer on the design and color of the poles and transmission line to achieve the minimum practicable visual impacts.
3. Structure holes left open overnight shall be covered. Covers shall be secure and strong enough to prevent livestock or wildlife from falling into holes.
4. Holder shall not blade or excavate to prepare a structure framing pad. If a structure cannot be framed on the natural ground, aerial framing or off-site framing will be necessary.

STANDARD DESIGN PRACTICES FOR POWER LINE PROJECTS

1. Unless otherwise agreed upon in writing, power lines shall be constructed according to standards as outlined in *Suggested Practices for Raptor Protection on Power Lines*, Raptor Research Foundation, Inc., 1981. Industry officials shall assume the burden and expense of proving that pole designs not shown in publications are eagle safe. Such proof shall be provided by a raptor expert approved by the authorized officer. The BLM reserves the right to require modifications or additions to all power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the BLM.

APPENDIX C

METHODOLOGY USED IN IDENTIFYING AREAS ACCEPTABLE FOR FURTHER COAL LEASING CONSIDERATION

Four screens, required by 43 CFR 3420-1, are applied during land use planning. The screens are applied to determine which coal lands should be considered for leasing. The first screen eliminates from coal leasing lands that have little or no coal leasing development potential. The second screen (coal unsuitability review) eliminates lands that contain sensitive resources. The third screen (multiple use tradeoffs) eliminates lands that contain resources considered more important than coal. And the fourth screen (surface owner consultation) eliminates private land containing federal coal based on the landowners' opposition to mining.

In the Grand Junction Planning Area, only the first three screens were applied. The fourth screen was not applied as it is only required when coal lands are to be surface mined. Using present technology, lands in the Grand Junction Planning Area would be mined by underground mining techniques in areas not previously leased.

Lands found acceptable in this plan will be considered for coal leasing by the Uintah-Southwestern Utah Regional Coal Team. The coal team and the Secretary of the Interior will then decide whether or not to offer for lease in the Uintah-Southwestern Utah coal sale any of the lands found acceptable in this RMP.

COAL DEVELOPMENT POTENTIAL (SCREEN 1)

A total of 364,489 acres were identified as having coal development potential based on (1) BLM estimates of the amount of recoverable coal and (2) information from coal companies and state and local governments. This does not include 41,391 acres currently under lease.

The lands with coal resource development potential in the Grand Junction Planning Area are located in the Book Cliff and Grand Mesa Coal Fields. The townships involved are listed below:

Sixth Principal Meridian: T. 5 S., Rs. 100-103 W.;
T. 6 S., Rs. 101-105 W.; T. 7 S., Rs. 100-105 W.;
T. 8 S., Rs. 99-105 W.; T. 9 S., Rs. 97-100 W.; T.
10 S., Rs. 97-100 W.; T. 11 S., Rs. 97-98 W.

Ute Principal Meridian: T. 1 N., R.1 E.

COAL UNSUITABILITY REVIEW (SCREEN 2)

The coal unsuitability review, required by the *Surface Mining Control and Reclamation Act* of 1977, involved the application of 20 criteria with exemptions and exceptions. The criteria, defined in 43 CFR 3461.1 were applied to both federal and private lands overlying federal coal. The exceptions were applied where appropriate. The exemptions were determined to be inappropriate. In the Grand Junction Planning Area, the current method of mining is underground mining. Therefore, the potential coal development area was assessed for suitability for underground mining only.

The best available data were used in the application of the criteria. With the exception of Criterion 17 (municipal watersheds), the data were determined to be satisfactory. A study of hydrologic resources within the Palisade municipal watershed is being conducted, among other things, define the municipal watershed boundary and determine potential effects of underground mining on water quantity. The results of this study might indicate that the area could be suitable for further coal leasing consideration. Should this happen, the watershed will be reevaluated for multiple use management and coal leasing.

Based on application of the criteria, 304,970 acres were found suitable for further leasing consideration. Approximately 162,658 acres were found suitable for leasing but sensitive to development, and 59,519 acres were found unsuitable. Of the acres found unsuitable, 45,419 acres (Little Book Cliffs and Demaree Canyon Wilderness Study Areas) were found unsuitable pending Congressional action on wilderness recommendations. These lands could become available for leasing following Congressional action on wilderness recommendations. Table C-1 lists the areas found unsuitable and sensitive. Map A shows the locations of the unsuitable areas.

Analysis of the Unsuitability Criteria

Note: Exemptions to criteria are not listed here. Exceptions to criteria are listed where applicable.

Table C-1
Areas Found Unsuitable and Sensitive

Criterion	Leasing Category (Acres)		Reason for Leasing Category
	Unsuitable	Sensitive	
2	0	unknown	Rights-of-way routes
	0	620	R&PP lease
	40	0	FAA Communication site ¹
3	0	128.5 miles	Public roads
	4,100	0	Colorado River corridor
4	45,419	0	Wilderness study areas ²
7	0	9,100	Cultural sites
9	0	23,859	Threatened and endangered wildlife habitat
10	0	23,859	State threatened wildlife habitat ³
11	0	7,191	Golden eagle habitat ⁴
13	0	1,720	Prairie falcon nest sites ⁴
14	0	139	Migratory species of high federal interest ³
15	0	119,548	Resident species of high federal interest ⁵
16	6		100-year flood plains (Colorado River corridor)
17	10,000	0	Palisade municipal watershed
19	0	2,400	Alluvial valley floors
	59,519	162,658 ⁷	

¹ These acres are included in criterion 17.

² WSAs are unsuitable pending congressional action on wilderness recommendations. WSAs not designated as wilderness by Congress could be considered for leasing at a later date.

³ These acres are included in criterion 9.

⁴ Includes 120 acres of overlap between areas of criteria 11 and 13.

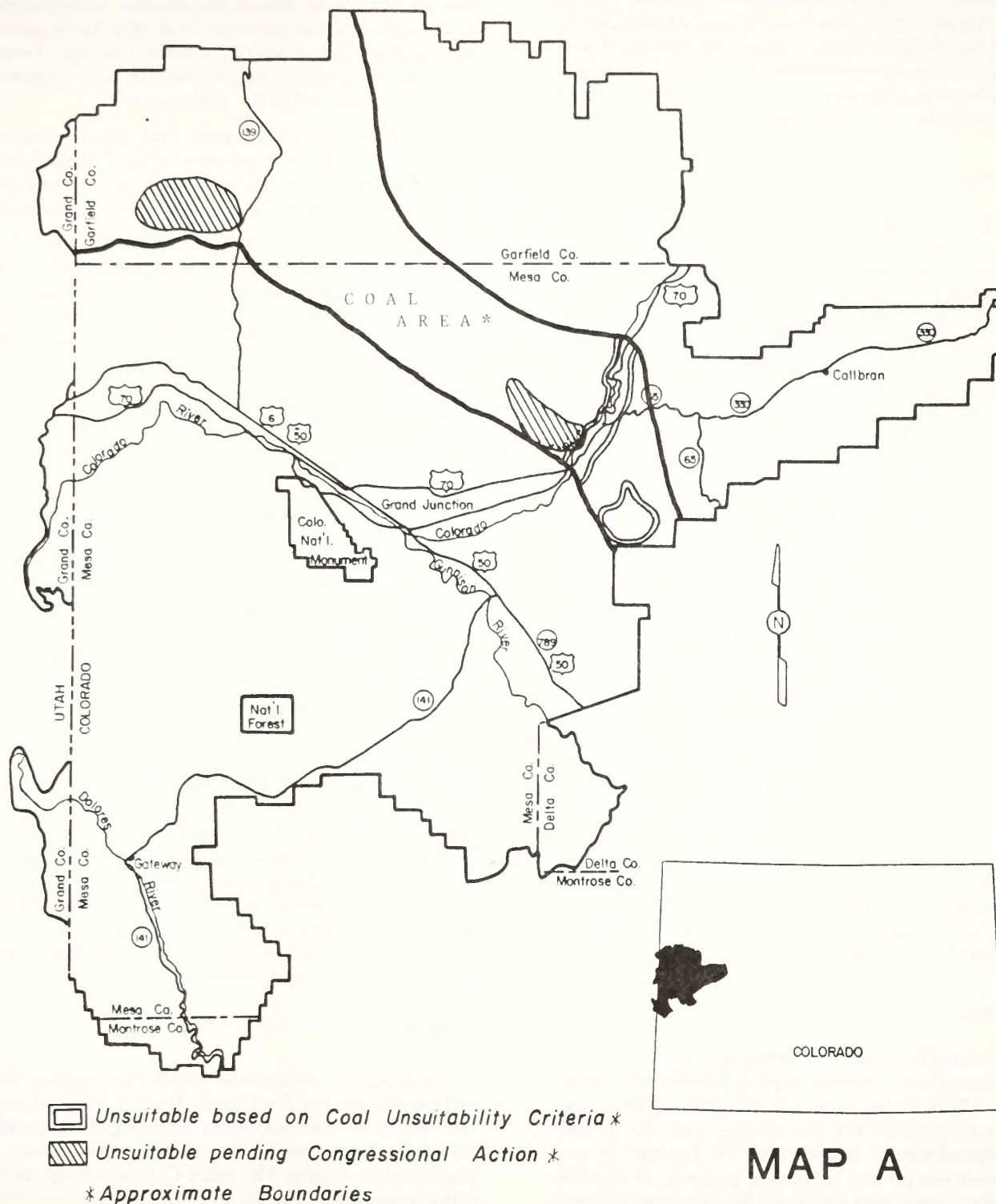
⁵ Includes 1,700 acres of overlap between critical deer and elk winter ranges.

⁶ Same acreage as Colorado River Corridor (criterion 3).

⁷ This total excludes rights-of-ways (criterion 2) and public roads (criterion 3).

GRAND JUNCTION PLANNING AREA

Application of Coal Unsuitability Criteria



MAP A

Criterion 1

All Federal lands included in the following land systems or categories shall be considered unsuitable: National Park System, National Wildlife Refuge System, National System of Trails, National Wilderness Preservation System, National Wild and Scenic Rivers System, National Recreation Areas, lands acquired with money derived from the Land and Water Conservation Fund, national forests, and Federal lands in incorporated cities, towns, and villages.

Exceptions.

(i) A lease may be issued within the boundaries of any National Forest if the Secretary finds no significant recreational, timber, economic or other values which may be incompatible with the lease; and (A) surface operations and impacts are incident to an underground coal mine, or (B) where the Secretary of Agriculture determines, with respect to lands which do not have significant forest cover within those National Forests west of the 100th meridian, that surface mining may be in compliance with the *Multiple-Use Sustained-Yield Act* of 1960, the *Federal Coal Leasing Amendments Act* of 1976 and the *Surface Mining Control and Reclamations Act* of 1977. (ii) A lease may be issued within the Custer National Forest with the consent of the Department of Agriculture as long as no surface coal mining operations are permitted.

Analysis.

No lands within these systems or categories are contained in the potential coal development area. Based upon this criterion, all lands are considered suitable for further leasing consideration.

Criterion 2

Federal lands that are within rights-of-way or easements or within surface leases for residential, commercial, industrial, or other public purposes on federally-owned surface shall be considered unsuitable.

Exceptions.

A lease may be issued, and mining operations approved, in such areas if the surface management agency determines that: (i) All or certain types of coal development (e.g., underground mining) will not interfere with the purpose of the right-of-way or easement; or (ii) The right-of-way or easement was granted for mining purposes; or (iii) The right-of-way or easement was issued for a purpose for which it is not being used; or (iv) The parties involved in the right-of-way or easement agree, in writing, to leasing; or (v) It is impractical to exclude such areas due to the location of coal and method of mining and such areas or uses can be protected through appropriate stipulations.

Analysis.

Numerous rights-of-way are present within the potential coal development area. The lands within these rights-of-way are suitable for leasing but sensitive to development. A no surface disturbance restriction will be required to protect these rights-of-way from surface damage. Table C-2 is a listing of major rights-of-way (6 inch diameter or greater pipeline and 230 KV power line).

A 40-acre tract on Lands End, being used as a communication site, is withdrawn for the Federal Aviation Administration (FAA). This 40-acre tract is unsuitable for leasing, and it is within the Palisade municipal watershed.

Recreation and Public Purposes (R&PP) Lease C-18227 for the Mesa County Gun Range is adjacent to the potential coal area. The public land adjacent to the R&PP lease (620 acres) is suitable for leasing but sensitive to development. A no surface occupancy restriction will be required to protect the R&PP lease.

Criterion 3

Federal lands affected by Section 522(c), (4), and (5) of the *Surface Mining Control and Reclamation Act* of 1977 shall be considered unsuitable. This includes lands within 100 feet of the outside line of the right-of-way of a public highway or within 100 feet of a cemetery, or within 300 feet of any occupied public building, school, church, community or institutional building or public park or within 300 feet of an occupied building.

Exceptions.

A lease may be issued for lands: (i) Used as mine access roads or haulage roads that join the right-of-way for a public road; (ii) For which the Office of Surface Mining Reclamation and Enforcement has issued a permit to have public roads relocated; (iii) If, after public notice and opportunity for public hearing in the locality, a written finding is made by the authorized officer that the interests of the public and the landowners affected by mining within 100 feet of a public road will be protected.

Analysis.

Interstate 70, on the east side of the Colorado River, and the Denver and Rio Grande Western Railroad, on the west side of the Colorado River, including the lands within 100 feet of the outside line of both rights-of-way, are unsuitable for mining. The entire Colorado River corridor is thus unsuitable.

The Colorado River corridor (De Beque Canyon) is a strategic location for the placement of surface facilities. If surface facilities were denied within this corridor, coal in adjacent areas could not be mined. Therefore, the

Table C-2
Sensitive Rights-of-Way
Within Potential Coal Development Areas

General Location	Right-of-Way No.	Company
Pipelines (Existing)		
Baxter Pass/West Salt Creek	C-17977	Western Slope Gas Company
	C-012469	Wesco Pipe Line
	C-029008	Western Slope Gas Company
	C-29366	Mid-America Pipeline Company
Douglas Pass	C-011243	Northwest Pipeline Corporation
	C-05006	Western Slope Gas Company
	C-22771	Northwest Pipeline Corporation
South Canyon	C-029008	Western Slope Gas Company
Calf Canyon/Hay Canyon	C-25378	Northwest Pipeline Corporation
	C-31007	Northwest Pipeline Corporation
	C-31078	Northwest Pipeline Corporation
	C-05006	Western Slope Gas Company
Pipelines (Proposed)		
Calf Canyon/Hay Canyon	C-35204	Parachute Pipeline Company
	C-36812	Shell Pipe Line Corporation
Power Lines (Pending)		
Coal Canyon and Book Cliffs	C-38521	Public Service Company of Colorado
Colorado River Corridor	C-29243	Public Service Company of Colorado

Colorado River corridor will be available for the placement of coal surface facilities.

Public roads, occupying approximately 128.5 miles of public land within the potential coal development area, are suitable for leasing but sensitive to development. A lease stipulation will be required to protect these roads from subsidence.

No known cemeteries, public buildings, schools, churches, community or institutional buildings, public parks, or occupied dwellings are on federal lands (surface) within the potential coal development area.

Criterion 4

Federal lands designated as wilderness study areas shall be considered unsuitable while under review by the Administration and the Congress for possible wilderness designation.

Analysis.

The Demaree Canyon (21,050 acres) and Little Book Cliffs (26,525 acres) WSAs are both within the Book Cliffs potential coal development area. Of these 47,575 acres, 2,156 acres are currently under coal lease. An estimated 277 million tons of in-place coal underlies the Demaree Canyon WSA, and an estimated 349 million tons of in-place coal underlies the Little Book Cliffs WSA. Both areas are unsuitable pending Congressional decisions on wilderness recommendations. (This determination is based on Section 308 of the FY 84 *Interior Appropriations Act* which prohibits leasing.) Wilderness study areas could become suitable if Congress does not designate them as wilderness.

Criterion 5

Scenic Federal lands designated by visual resource management analysis as Class I (an area of outstanding scenic quality or high visual sensitivity) but not currently on the *National Register of Natural Landmarks* shall be considered unsuitable. A lease may be issued if the surface management agency determines that surface coal mining operations will not significantly diminish or adversely affect the scenic quality of the designated area.

Analysis.

No areas of federal land are presently designated as VRM Class I within the area under consideration.

Criterion 6

Federal lands under permit by the surface management agency, and being used for scientific studies involving food or fiber production, natural resources, or technology demonstrations and experiments shall be considered unsuitable for the duration of the study, demonstrations or experiment, except where mining could be conducted in such a way as to enhance or not jeopardize the purposes of the study, as determined by the surface management agency, or where the principal scientific user or agency gives written concurrence to all or certain methods of mining.

Analysis.

No lands within the potential coal development area are under permit for scientific study.

Criterion 7

All publicly owned places on Federal lands which are included in the *National Register of Historic Places* shall be considered unsuitable. This shall include any areas that the surface management agency determines, after consultation with the Advisory Council on Historic Preservation and the State Historic Preservation Office, are necessary to protect the inherent values of the property that made it eligible for listing in the *National Register*.

Exceptions.

All or certain stipulated methods of coal mining may be allowed if the surface management agency determines, after consultation with the Advisory Council on Historic Preservation and State Historic Preservation Office that the direct and indirect effects of mining, as stipulated, on a property in or eligible for the *National Register of Historic Places* will not result in significant adverse impacts to the property.

Analysis.

Fifty-four cultural resource sites are considered eligible or likely to be eligible for the *National Register of Historic Places* (NRHP), and one region has been proposed for nomination to the NRHP as an archaeological district. These areas are suitable for leasing but sensitive to development.

All areas of direct impact resulting from underground mining (including areas of suspected subsidence) and associated surface facilities will require a 100 percent pedestrian survey (Class III) to locate cultural resources. Consultation with the State Historic Preservation Officer will be required on located resources prior to approving any surface-disturbing activities. Any existing and newly-discovered sites will be identified and avoided or protected by other means.

Criterion 8

Federal lands designated as natural areas or as National Natural Landmarks shall be considered unsuitable.

Exceptions.

A lease may be issued and mining operation approved in an area or site if the surface management agency determines that: (i) With the concurrence of the state, the area or site is of regional or local significance only; (ii) The use of appropriate stipulated mining technology will result in no significant adverse impact to the area or site; or (iii) The mining of the coal resource under appropriate stipulations will enhance information recovery (e.g., paleontological sites).

Analysis.

No natural areas or national natural landmarks are designated within the potential coal development area.

Criterion 9

Federally designated critical habitat for threatened or endangered plant and animal species, and habitat for Federal threatened or endangered species which is determined by the Fish and Wildlife Service and the surface management agency to be of essential value and where the presence of threatened or endangered species has been scientifically documented, shall be considered unsuitable.

Exceptions.

A lease may be issued and mining operations approved if, after consultation with the Fish and Wildlife Service, the Service determines that the proposed activity is not likely to jeopardize the continued existence of the listed species and/or its critical habitat.

Analysis.

Of the eight species listed as threatened or endangered in this region (Grand Junction District), seven have a visible potential to be adversely impacted by coal mining. These are the peregrine falcon, bald eagle, whooping crane, black-footed ferret, the Colorado River squawfish, humpback chub, and the Uinta Basin hookless cactus. Habitats containing these species are suitable for leasing but sensitive to development. If these named species or any others are found subsequent to this review to make substantial use of lands within the potential coal development area, stipulations will be required to protect them. To protect the bald eagle, squawfish, chub, and cactus:

1. No surface facilities will be allowed within the Colorado River riparian zone without prior approval from the authorized BLM officer.
2. Critical habitat area that would be impacted by surface facilities outlined in mine plan will be surveyed prior to mine plan approval. The mine plan will incorporate avoidance of the cactus sites.

(See Criterion 13 for protection of peregrine falcons.)

Criterion 10

Federal lands containing habitat determined to be critical or essential for plant or animal species listed by a state pursuant to state law as endangered or threatened shall be considered unsuitable.

Exception.

A lease may be issued and mining operations approved if, after consultation with the state, the surface management agency determines that the species will not be adversely affected by all or certain stipulated methods of coal mining.

Analysis.

The species present are bald eagle, peregrine falcon, greater sandhill and whooping crane, razorback sucker, Colorado River squawfish, and humpback chub. The habitat of these species are suitable for leasing but sensitive to development. Stipulation will be required as needed to protect the habitat of these species from subsidence and surface occupancy impacts.

In addition, to protect the bald eagle and three river fishes that make substantial use of the potential coal development area, no surface facilities will be allowed within the Colorado River riparian zone without prior approval from the authorized BLM officer.

Criterion 11

A bald or golden eagle nest or site on Federal lands that is determined to be active and an appropriate buffer zone of land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

Exceptions.

A lease may be issued if (i) It can be conditioned in such a way, either in manner or period of operation, that eagles will not be disturbed during breeding season; or (ii) The surface management agency, with the concurrence of

the Fish and Wildlife Service, determines that the golden eagle nest(s) will be moved; (iii) Buffer zones may be decreased if the surface management agency determines that the active eagle nests will not be adversely affected.

Analysis.

Several golden eagles nest within the potential coal development area, mostly along the Book Cliffs. Golden eagle habitat is suitable for leasing but sensitive to development. To protect golden eagles:

1. An approximate one-quarter mile buffer zone will be delineated around all active golden eagle nests (Snow 1973). Actual buffer zones will be determined through consultation with the U.S. Fish and Wildlife Service.
2. No surface activities associated with the construction of mine features will be allowed within the zones between February 15 and July 1.
3. No surface facilities which require daily human activities shall be built within active areas or within buffer zones with active nests.
4. The mine surface facilities within the buffer zone must be designed to not impair the site for nesting golden eagles and must be approved by the authorized BLM officer.

Criterion 12

Bald and golden eagle roost and concentration areas on Federal lands used during migration and wintering shall be considered unsuitable.

Exception.

A lease may be issued if the surface management agency determines that all or certain stipulated methods of coal mining can be conducted in such a way, and during such periods of time, to ensure that eagles shall not be adversely disturbed.

Analysis.

Some bald eagle roosting activity takes place at the upper end of the Colorado River within the potential coal development area. This roosting area is suitable for leasing but sensitive to development. If the use changes and bald eagle roosting-site needs become apparent prior to leasing, a winter seasonal restriction may be placed on development.

Criterion 13

Federal lands containing a falcon (excluding kestrel) cliff nesting site with an active nest and a buffer zone of Federal land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey; species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

Exception.

A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal mining will not adversely affect the falcon habitat during the periods when such habitat is used by the falcons.

Analysis.

Prairie falcons nest within the potential coal development area, primarily along the Book Cliffs. These areas are suitable for leasing but sensitive to development. Peregrine falcons do not presently nest within the review area. No surface activities shall be allowed within one-quarter mile of an active prairie or peregrine falcon nest between March 15 and July 1.

Criterion 14

Federal lands which are high priority habitat for migratory bird species of high Federal interest on a regional or national basis, as determined jointly by the surface management agency and the Fish and Wildlife Service, shall be considered unsuitable.

Exception.

A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal mining will not adversely affect the migratory bird habitat during the periods when such habitat is used by the species.

Analysis.

Nine species on the list of migratory species of high federal interest are known to breed within or near the potential coal development area. These are the western bluebird, golden eagle, prairie falcon, Cooper's hawk, great blue heron, Scott's oriole, burrowing and flammulated owl, Williamson's sapsucker, long-billed curlew, ferruginous hawks, band-tailed pigeons and Lewis' woodpeckers. The habitat of these migratory bird species is suitable for leasing but sensitive to development. To protect migratory bird species:

1. No surface facilities will be allowed within the Colorado River riparian zone without prior approval from the authorized BLM officer.
2. The lessee will survey the leased area for use by the above species to determine habitat that would be impacted by surface facilities outlined in mine plan prior to mine plan approval.

Criterion 15

Federal land which the surface management agency and the state jointly agree are fish and wildlife habitat for resident species of high interest to the state and which are essential for maintaining these priority wildlife species shall be considered unsuitable. Examples of such lands which serve a critical function for the species involved include:

- (i) Active dancing and strutting grounds for sage grouse, sharp-tailed grouse, and prairie chicken;
- (ii) Winter ranges most critical for deer, antelope, and elk; and
- (iii) Migration corridors for elk.

Exception.

A lease may be issued if, after consultation with the state, the surface management agency determines that all or certain stipulated methods of coal mining will not have a significant long-term impact on the species being protected.

Analysis.

There are 10 game, 3 furbearer, and 13 or 14 nongame species within the coal resource area that have been identified as high interest residents. These are elk, mule deer, black bear, puma, cottontail, sage grouse, turkey, Gambel's quail, brook and rainbow trout, bobcat, ringtail, beaver, pinyon mouse, sagebrush vole, western jumping mouse, southern red-backed vole, great blue heron, three-toed woodpecker, Lewis's woodpecker, pinyon jay, bushtit, plain titmouse, Bewick's wren, mountain bluebird, pine grosbeak, and possibly pika. Habitat of these species is suitable for leasing but sensitive to development.

Surface occupancy within deer and elk critical winter range and construction or daily activity within elk calving areas will be allowed only if no reasonable alternative sites exist outside the critical habitat. Lease stipulations as determined by BLM and the Colorado Division of Wildlife will be required to minimize disturbance within the critical habitats. Special protective emphasis will be given to activities between December 1 and May 1 on the critical winter ranges and between May 15 and June 15 within the calving areas.

One or more of the following stipulations will be required to protect perennial streams and associated riparian vegetation:

1. Appropriate buffer strips under perennial streams to protect against subsidence.
2. Appropriate siting of roads, surface facilities, etc., to protect these areas (especially avoidance, if possible).
3. Proper culvert sizing and installation to avoid channel erosion.
4. Proper control of mine site drainage to avoid polluting the stream or causing downcutting through increased runoff.
5. Avoidance of opening underground areas which would cause rerouting of underground water (springs, etc.) which feed the streams and riparian areas.

Criterion 16

Federal lands in riverine, coastal and special flood plains (100-year recurrence interval) on which the surface management agency determines that mining could not be undertaken without substantial threat of loss of life or property shall be considered unsuitable for all or certain stipulated methods of coal mining.

Analysis.

No coastal flood plains exist in the potential coal lease areas. One hundred year flood plains exist along the drainages in the potential coal development area, but only the Colorado River has been delineated. The entire Colorado River corridor has been identified unsuitable (see Criterion 3). However, it is available for placement of surface facilities. Mine plans must consider the effects of mine operations on adjacent flood plains and mitigate impacts.

Criterion 17

Federal lands which have been committed by the surface management agency to use as municipal watersheds shall be considered unsuitable.

Exception.

A lease may be issued where the surface management agency in consultation with the municipality (incorporated entity) or the responsible governmental unit determines, as a result of studies, that all or certain stipulated methods of coal mining will not adversely affect the watershed to any significant degree.

Analysis.

The Palisade municipal watershed is within the potential coal lease area and encompasses the Rapid Creek watershed. Presently the lower part of the watershed is leased for coal.

The upper part, containing Palisade's reservoirs and collection systems, has not been leased. Much of Palisade's water supply is derived from springs filtering through fractures in the basalts on the Grand Mesa. Underground coal mining through subsidence or direct interception might cause these waters to reroute away from their present locations. This could cause a serious impact on Palisade's water supply. The coal beds are well below ground in the area, but the fracture system supplying these springs is not well understood. These fractures are probably deep-lying, and even subsidence that didn't reach the surface could impact them. Thus, all of the area that feeds Palisade's water system is unsuitable for leasing, pending further study of the area's hydrologic system. This would take approximately 10,000 acres of land out of the potential coal lease area, most of which is private surface, federal minerals.

The town of Palisade supports no coal leasing in the area where they obtain their water supplies. They have no objections to coal leasing in the lower part of their watershed as long as the coal company is responsible for any damage to their pipelines.

Criterion 18

Federal lands with National Resource Waters, as identified by states in their water quality management plans, and a buffer zone of Federal lands 1/4 mile from the outer edge of the far banks of the water shall be unsuitable.

Exception.

The buffer zone may be eliminated or reduced in size where the surface management agency determines that it is not necessary to protect the National Resource Waters.

Analysis.

No national resource waters have been identified by the State of Colorado in the potential coal lease area.

Criterion 19

Federal lands identified by the surface management agency, in consultation with the state in which they are located, as alluvial valley floors according to the definition in 3400.0-5(a) of this title, the standards in *30 CFR Part 822*, the final alluvial valley floor guidelines of the Office of Surface Mining Reclamation and Enforcement when published, and approved state programs under the surface Mining Control and Reclamation Act of 1977, where mining would interrupt, discontinue, or preclude farming, shall be considered unsuitable. Additionally, when mining Federal land outside an alluvial valley floor would materially damage the quantity or quality of water in surface or underground

water systems that would supply alluvial valley floors, the land shall be considered unsuitable.

Analysis.

The Office of Surface Mining has tentatively identified the following areas (approximately 2,400 acres) in the potential coal development area as alluvial valley floors (AVFs). Most of these areas are undeveloped rangelands not presently significant to agriculture.

1. The alluvium of West Salt Creek from the headwaters to approximately 2 miles south of the Book Cliffs.
2. The alluvium of East Salt Creek from the headwaters to approximately 2 miles south of the Book Cliffs.
3. The alluvium of Big Salt Wash from the headwaters to approximately 3 miles south of the Book Cliffs.
4. Several subirrigated areas in the headwaters area of Middle Dry Fork, North Dry Fork, McKay Fork, and Kimball Creek.

Tentatively identified alluvial valley floors are suitable for leasing but sensitive to development. Stipulations will be required to ensure water supplies of these areas are not affected by underground coal mining.

Criterion 20

Federal lands in a state to which is applicable a criterion (i) proposed by that state, and (ii) adopted by rulemaking by the Secretary, shall be considered unsuitable.

Exception.

A lease may be issued when: (i) Such criterion is adopted by the Secretary less than 6 months prior to the publication of the draft comprehensive land use plan or land use analysis, plan, or supplement to a comprehensive land use plan, for the area in which such land is included, or (ii) After consultation with the state, the surface management agency determines that all or certain stipulated methods of coal mining will not adversely affect the value which the criterion would protect.

Analysis.

This criterion does not apply at this time in Colorado.

MULTIPLE USE TRADEOFFS (SCREEN 3)

The multiple use tradeoffs screen was applied as part of the land use conflict resolution process. Where conflicts were identified between coal development and development or protection of other resources, a determination was made as to which resource was more important. Where another resource was more important than coal or potential impacts could not be mitigated, the conflict area was removed from further leasing consideration. No areas were found unacceptable; however, one area was identified as having possible conflicts. This area, the Little Book Cliffs Wild Horse Range, is acceptable pending further study to determine the effects of surface facilities in upper Coal Canyon on the viability of the horse herd. Table C-3 shows the results of the multiple use tradeoffs.

Table C-3
Results of Coal Planning Review

	Acres
Acres available for leasing following Screen 2 ^a	350,389
Less acres removed following Screen 3	0
Little Book Cliffs Wild Horse Range	0 ^b
Acres acceptable for further coal leasing consideration following Screen 3	350,389

^a Includes two WSAs (45,419 acres) that cannot be considered for leasing until Congress releases them from wilderness review.

^b The wild horse range (24,421 acres) is acceptable pending further study.

APPENDIX D

OIL AND GAS LEASE STIPULATIONS

The following stipulations will be added as appropriate to any future oil and gas leases issued in areas identified as *Open to Leasing with Stipulations*. They also will be added to applications for permit to drill (APDs) on existing leases to the extent consistent with lease rights. The number and types of stipulations placed on leases or APDs will depend on the resources present in the area.

1. No Surface Occupancy Stipulation

No occupancy or other activity will be allowed on the following portions of this lease to protect (identify sensitive resource): (legal description). This stipulation may be waived or reduced in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

2. Scenic and Natural Values Stipulation

Special design and reclamation measures may be required to protect the outstanding scenic and natural landscape values of (identify the resource and area) located on the following portions of this lease: (legal description). Special design and reclamation measures may include transplanting trees and shrubs, fertilization, mulching, special erosion control structures, irrigation, site recontouring to match the original contour, buried tanks and low profile equipment, and painting to minimize visual contrasts. Surface disturbing activities may be denied in sensitive areas, such as unique geologic features and rock formations, visually prominent areas, and high recreation use areas.

This stipulation may be waived or reduced in scope if circumstances change or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

3. Steep Slope Stipulation

The following portions of the lease include land with greater than 40 percent slopes: (fill in legal description). In order to avoid or mitigate unacceptable impacts to soil, water, and vegetation resources on these lands, special design practices may be necessary and higher than normal costs may result. Where impacts cannot be mitigated to the

satisfaction of the authorized office, no surface-disturbing activities shall be allowed.

This stipulation may be waived or reduced in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

4. Elk Calving Area Stipulation

In order to protect important seasonal wildlife habitat, lease activities such as exploration, drilling, and other development will be allowed only during the period from June 15 to May 15 on the following portions of this lease: (legal description). This limitation does not apply to maintenance and operation of producing wells. In addition, no surface-disturbing activity will be allowed on elk calving sites.

This stipulation may be waived or reduced in scope if circumstances change or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

5. Known Cultural Resource Value Stipulation

Important cultural resource values (identify resource values) are present on the following portions of this lease: (legal description). Surface-disturbing activities must avoid these areas unless mitigation of impacts is agreed to by the authorized officer. Where impacts cannot be mitigated to the satisfaction of the authorized officer, surface occupancy on that area must be prohibited.

6. Watershed Stipulation

All lease operations will avoid interference with (identify municipal watershed) located on the following portions of this lease: (legal description). This may include the relocation of proposed roads, drilling sites and other facilities, or application of appropriate mitigating measures.

This stipulation may be waived or reduced in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

7. Perennial Streams Water Quality Stipulation

In order to reduce impacts to water quality, surface-disturbing activities within 100 feet of perennial streams is limited to essential roads and utility crossings. The affected portions of this lease are: (legal description).

This stipulation may be waived or reduced in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

8. Gunnison Gravels and Indian Wash Dam Stipulation

No surface-disturbing activities will be allowed in the Gunnison Gravels Research Natural Area or the Indian Wash Dam.

This stipulation may be waived or reduced in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

9. Bighorn Seasonal Stipulation

In order to protect important seasonal wildlife habitat, lease activities such as exploration, drilling, and other development will be allowed only during the period from May 1 to December 1 on the following portions of this lease: (legal description). This limitation does not apply to maintenance and operation of producing wells.

This stipulation may be waived or reduced in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

10. Wild Horse Winter Range Stipulation

In order to protect important wild horse habitat, lease activities such as exploration, drilling, and other development will be allowed only during the period from May 1 to December 1 on the following portions of this lease: (legal description). This limitation does not apply to maintenance and operation of producing wells.

This stipulation may be waived or reduced in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

11. Wild Horse Foaling Area Stipulation

In order to protect important seasonal wild horse habitat, lease activities such as exploration, drilling, and other development will be allowed only during the period from July 1 to March 1 on the following portions of this lease: (legal description). This limitation does not apply to maintenance and operation of producing wells.

This stipulation may be waived or reduced in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

12. Deer and Elk Winter Range Stipulation

In order to protect important seasonal wildlife habitat, lease activities such as exploration, drilling, and other development will be allowed only during the period from May 1 to December 1 on the following portions of this lease: (legal description). This limitation does not apply to maintenance and operation of producing wells.

This stipulation may be waived or reduced in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concern(s) identified.

13. Threatened and Endangered Habitat Stipulations

The following portions of this lease are within the known habitat of the (species name): (legal description).

The lessee/operator shall submit a plan for avoidance or mitigation of impacts on the identified species to the authorized officer. This may require completion of an intensive inventory by a qualified biologist. The plan must be approved prior to any surface disturbance. The authorized officer may require additional mitigation measures such as relocation of proposed roads, drilling sites, or other facilities. Where impacts cannot be mitigated to the satisfaction of the authorized officer, surface occupancy on that area must be prohibited.

14. Threatened and Endangered Seasonal Habitat Stipulation

In order to protect important seasonal habitat of the threatened or endangered animal species (species name), any lease operations which may affect these species will be allowed only during the period from (date) to (date)

(varies by species) on the following portions of this lease: (legal description). Exceptions to this limitation in any particular year may be specifically approved in writing by the authorized officer.

APPENDIX E

LIVESTOCK GRAZING SUMMARY UPDATE

Table E-1 is an update of The Summary of Intensive and Less Intensive AMPs as listed in the *Grand Junction Grazing Environmental Statement*. Following is an explanation of what is in each column.

- (1) Management category. This shows the general management objective for each allotment: I = improve existing resource conditions, most intensive management; M = maintain existing resource condition, less intensive management; and C = custodial management, least intensive management.
- (2) The grazing system designed for the allotment. RR = rest rotation grazing; DEF = deferred grazing; BP = best pasture grazing.
- (3) Implementation status. IMP = Allotment Management Plan (AMP) fully implemented; Part = AMP partially implemented; NOT = AMP not implemented. (BLM has initiated the following integrated rangeland studies on all implemented and partially implemented allotments: Wildlife — pellet group transects, browse utilization, browse form and class, riparian and aquatic; Watershed — sediment yield and precipitation; Range — actual use, utilization and range trend.)
- (4) Public acres. The acres of public land in the allotment.
- (5) Authorized use. The upper limit animal in unit months of livestock use that can be made on public land in an allotment. The number of livestock multiplied by the period of use (in months) cannot exceed the authorized use.
- (6) Numbers of livestock. The average number of livestock that could be on the allotment.
- (7) Kind of livestock authorized to graze that allotment. C = cattle; S = sheep; H = horses.
- (8) Percent public land. The percentage of total forage in the allotment produced on public land (AUMs).
- (9) Period of use. The average time when livestock are present on the allotment.

Please note: (1) the Cameo Allotment No. 6708 and Gipp Allotment No. 6822 no longer have authorized grazing use and are not listed on the table, (2) Powell Allotment No. 6717 has been transferred to the White River Resource Area for grazing administration, and (3) changes in the public AUMs and allotments from that published in the grazing ES are explained in the footnotes.

Table E-1. Livestock Grazing Summary Update

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Allotment		Management	Grazing	Management	Public	Author-	Livestock		Percent	
Number	Name	Category	System	Status	Acres	ized Use (AUMs)	Numbers	Kind	Federal	Period of Use
6101	Fish Park <u>1/</u>	I	RR	IMP	3863	570	250 320	C C	100 100	10/15-11/14 05/01-05/31
6102	Brush Hole	C			33	28	140	C	010	10/01-11/30
6103	Haystack	M	DEF	IMP	1352	153	64	C	040	05/15-11/15
6105	South of the Road <u>2/</u>	M	DEF	IMP	1350	57	28 42	C C	075 075	12/11-12/30 04/05-05/15
6106	East Tom's Canyon Common <u>3/</u>	I	DEF	IMP	3788	164	100 142 25	C C C	100 100 100	10/09-10/17 05/01-05/31 11/01-12/10
6108	Longshore Above Rims	M	DEF	NOT	664	80	32	C	100	07/16-09/30
6109	Longshore Below Rims	M	DEF	NOT	1212	142	417	C	019	06/01-07/15
6110	Sieber Canyon	C			1400	48	12	C	100	11/01-02/28
6111	McKenzie	M	DEF	NOT	409	52	22 131	C C	077 077	06/01-07/15 10/01-10/08
6112	Dierich Ranch	C			1355	54	777	S	023	05/20-06/10 10/17-11/08
6113	Fessler <u>4/</u>	M	DEF	IMP	900	63	890	S	082	05/28-06/09
6115	Spring Creek	I	DEF	NOT	5547	381	121	C	067	05/20-10/10
6116	Bangs	I	RR	NOT	23623	1563	234	C	100	11/10-05/29
6117	Files	M	DEF	NOT	2814	127	103 237	C C	029 029	11/14-01/16 05/15-06/11
6118	King-Rogers	C			1224	121	27	C	100	06/17-10/31
6119	Dead Horse	I	RR	NOT	1087	22	22	C	100	01/01-01/30
6120	Landini	I	RR	NOT	2430	161	160	C	094	02/01-02/28
6121	Notch Spring	I	RR	NOT	3037	271	225 335 464	C C C	023 023 023	06/15-08/09 05/09-06/15 11/01-11/09

Table E-1 (Continued)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Allotment		Management	Grazing	Management	Public	Author-	Livestock		Percent	
Number	Name	Category	System	Status	Acres	ized Use (AUMs)	Numbers	Kind	Federal	Period of Use
6122	Clarks Bench	I	RR	NOT	2663	106	100	C	086	05/09-06/15
6123	Upper Bench	I	DEF	NOT	5478	328	70 127	C C	100 100	04/10-05/20 01/01-02/25
6124	Woods	C			448	120	147 900	C S	020 020	07/01-10/20 07/10-07/19
6125	Lower Bench	I	DEF	NOT	16022	1400	302 902 909	C S S	100 100 100	12/01-02/28 12/24-02/28 03/01-03/17
6126	28 Hole	I	DEF	NOT	1615	59	370 926 926	S S S	028 028 028	04/20-06/01 03/18-03/26 12/16-12/23
6127	Duval	M	DEF	NOT	728	57	37	C	100	05/15-06/30
6128	Skinner	M	DEF	NOT	1805	64	86 900	C S	022 022	05/05-06/30 05/15-06/05
6129	Snyder Flats ^{5/}	I	DEF	NOT	2983	415	302 1450 87	C S C	038 038 038	05/12-06/15 05/12-06/21 06/16-10/20
6130	Colorado Ridge	I	DEF	NOT	11853	659	140	C	094	12/15-05/15
6131	Leslie-Bays	C			1505	78	20 38 50	C C S	100 100 100	01/01-01/31 06/01-06/15 12/01-12/15 01/05-02/28
6132	Payne Wash	C			2323	26	100 108	C C	050 050	06/16-06/20 11/16-11/25
6133	Reservation	I	DEF	NOT	2744	122	40 60 500	C C S	089 089 089	04/10-05/09 12/18-01/25 12/01-12/17
6134	Little Dolores River	C			1675	85	12 100 107	C S S	100 100 100	06/01-10/31 11/01-11/15 05/20-06/10

Table E-1 (Continued)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Allotment		Management	Grazing	Management	Public	Author-	Livestock		Percent	
Number	Name	Category	System	Status	Acres	ized Use (AUMs)	Numbers	Kind	Federal	Period of Use
6135	Little Dolores Bench	I	DEF	NOT	775	97	60 61 500	C C S	039 039 039	04/10-05/09 12/01-01/31 02/01-02/20
6136	Knowles	I	DEF	NOT	5260	234	50 67	C C	100 100	04/01-05/31 01/01-02/28
6137	Timber Ridge	I	DEF	NOT	2120	221	52 83 750	C C S	100 100 100	06/01-06/30 10/01-11/15 11/07-11/15
6138	Black Ridge	I	DEF	NOT	4615	459	113	C	072	12/16-06/04
6139	Flat Rock	C			653	114	21 750	C S	100 100	07/01-10/31 11/01-11/06
6140	Moore	C			366	48	4	C	100	03/01-02/28
6141	Burke	I	RR	NOT	2157	100	100	C	100	05/15-07/14 10/15-12/14
6142	Colorado River <u>6/</u>	I	RR	NOT	8018	232	368	C	061	05/15-07/14 10/15-12/14
6143	Radio Tower	I	RR	NOT	905	119	88 205	C C	029 029	11/15-12/15 05/24-07/10
6145	Palisade Point	M	DEF	IMP	1244	91	182	C	100	05/21-06/04
6146	North Fork	C			1166	60	17	C	100	06/15-09/28
6147	Holloway	C			413	14	8 53	C S	050 050	04/01-05/15 04/01-05/15
6148	Thompson	M	DEF	NOT	4781	54	36	C	030	05/01-10/01
6150	Metz	M	RR	IMP	2190	80	54	C	074	08/01-09/30
6151	Pineridge	C			1285	120	40 62	C C	030 030	10/16-10/31 05/25-10/15
6152	Round Knob <u>7/</u>	M	DEF	IMP	3687	342	89 253	C C	100 100	05/01-05/31 01/01-01/31
6153	Burford Individual	C			629	42	500	C	010	06/20-07/14

Table E-1 (Continued)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Allotment		Management	Grazing	Management	Public	Author-	Livestock			
Number	Name	Category	System	Status	Acres	ized Use (AUMs)	Numbers	Kind	Percent Federal	Period of Use
6154	Lost Canyon <u>8/</u>	I	DEF	Part	32481	2791	438	C	091	03/01-05/30 11/01-02/28
6155	Little Dolores Canyon	C			1533	96	8	C	100	03/01-02/28
6156	North East Creek	M	DEF	NOT	3553	81	40	C	100	05/01-06/16 10/01-10/15
6157	Boulder Canyon	I	DEF	IMP	2888	132	37 75	C C	088 088	12/01-12/31 05/16-06/15
6158	Ladder Canyon	I	DEF	IMP	2425	142	110	C	051	06/16-07/15 10/01-11/15
6159	Cook Canyon	C			195	18	3	C	100	05/01-10/31
6160	Mabie	C			66	10	2	C	100	06/01-10/31
6161	Coates Creek <u>7/</u>	C			295	26	26	C	100	04/23-05/22
6162	Hall	C			72	5	8	C	062	06/01-06/30
6163	West Tom's Canyon	I	DEF	IMP	3232	110	25 85	C C	100 100	12/01-12/31 04/20-05/19
6164	Fish Canyon	I	DEF	Part	3933	180	75 120	C C	100 100	12/06-12/29 04/20-05/19
6165	Beezer <u>8/</u>	I	RR	IMP	1130	251	160 160	C C	100 100	04/12-05/13 11/16-11/30
6166	Hill Creek-Flats	I	DEF	Part	5069	710	332 506	C C	088 088	11/01-11/15 06/03-07/10
6167	Battleship	C			1807	78	3 50 105	C S S	100 100 100	03/01-02/28 11/15-12/25 05/01-06/10
6168	Rattlesnake	C			735	21	7	C	050	03/01-04/30 11/01-02/28
6201	Davis AMP	I	RR	IMP	5160	427	110 140	C C	100 100	11/21-01/20 04/15-05/31

Table E-1 (Continued)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Allotment		Management	Grazing	Management	Public	Author-	Livestock		Percent	
Number	Name	Category	System	Status	Acres	ized Use (AUMs)	Numbers	Kind	Federal	Period of Use
6202	Kannah Creek Common ^{8/}	I	RR	Part	29710	3698	821 821 200	C C C	100 100 100	05/01-06/30 10/01-11/30 12/01-01/31
6203	Whitewater Common	M	DEF	NOT	22300	2422	670 670	C C	089 089	04/15-06/15 10/11-12/31
6204	Highway 50	C			920	77	54 81 100	C C C	100 100 100	05/20-05/25 11/21-12/07 11/15-11/20
6205	Whitewater Hill	C			1300	118	42 50	C C	100 100	05/08-05/27 10/28-12/21
6206	Bean	C			500	45	15	C	100	12/01-02/28
6207	Kannah Creek Individual	C			1150	105	47 117	C C	100 100	04/01-04/31 11/15-12/31
6301	Gibbler Common	I	RR	Part	45012	3315	845 1108 176	C C C	100 100 100	05/01-06/16 10/01-12/31 12/28-02/27
6302	Wagon Park	I	RR	NOT	31385	1164	515 649	C C	100 100	10/16-11/15 05/01-05/31
6303	Triangle Mesa	C			3612	96	45	C	100	11/15-01/19
6304	Woodring	I	DEF	IMP	1167	75	64 72	C C	050 050	04/26-05/31 10/15-11/115
6401	Palisade Flats	I	RR	IMP	8780	400	126 153	C C	100 100	12/01-12/31 04/01-05/25
6402	Bull Draw Common	M	DEF	IMP	5084	182	45 91	C C	100 100	04/27-05/26 10/16-11/31
6403	Dugway ^{9/}	I	DEF	IMP	7254	296	1005	S	100	04/15-05/20
6404	Beaver Mesa	I	DEF	IMP	889	86	40 86	C C	100 100	11/02-12/01 11/14-12/13
6405	Wright Draw	M	DEF	IMP	3525	138	40 39	C C	100 100	04/24-05/24 10/16-12/31

Table E-1 (Continued)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Allotment		Management	Grazing	Management	Public	Author-	Livestock		Percent	
Number	Name	Category	System	Status	Acres	ized Use (AUMs)	Numbers	Kind	Federal	Period of Use
6406	Blue Mesa <u>10/</u>	I	DEF	NOT	42410	2176	311	C	100	11/01-05/31
6407	Bull Hill-Maverick Common <u>7/</u>	I	DEF	NOT	14354	563	129 196	C C	100 100	04/16-05/31 10/16-11/30
6408	Casto-Lines Common <u>11/</u>	I	DEF	IMP	1565	133	52 65	C C	100 100	04/16-05/24 11/01-12/31
6409	Sinbad Valley <u>10/</u>	I	DEF	NOT	10155	550	80	C	100	10/20-05/15
6410	Ute Creek Comm.	M	DEF	IMP	6908	260	35	C	100	10/15-05/27
6411	Dolores River <u>7/</u>	M	DEF	IMP	1751	158	57 68	C C	071 071	11/16-01/25 04/16-05/25
6413	Ames	C			281	21	10	C	100	12/01-01/31
6415	Tom Casto	C			65	6	3	C	100	03/01-04/30
6416	North Creek	I	DEF	IMP	4155	55	70 77	C C	025 025	04/01-05/15 12/01-01/15
6417	Unawee N. Side	C			2880	193	250	C	011	03/01-05/31 11/01-02/28
6418	Unawee S. Side	C			1247	117	150 200	C C	015 015	10/16-12/31 04/01-05/31
6419	Hubbard	I	DEF	IMP	27411	831	86 88 139 225	C C C C	090 090 082 005	04/01-05/31 11/16-01/15 04/01-05/31 06/01-11/15
6420	GML <u>12/</u>	M	DEF	IMP	2980	132	66 66	C C	100 100	03/01-03/31 12/01-12/31
6421	Mule Trail Draw	C			81	8	30	C	025	12/11-01/10
6422	J.L.	C			151	37	24	C	034	03/01-05/15 12/31-02/28
6423	EHL & West Creek	C			382	2	1	C	100	02/01-02/28 03/01-03/31
6424	Berg's North Mesa	M	DEF	NOT	1783	143	50	C	064	05/17-09/30

Table E-1 (Continued)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Allotment		Management	Grazing	Management	Public	Author-	Livestock		Percent	
Number	Name	Category	System	Status	Acres	ized Use (AUMs)	Numbers	Kind	Federal	Period of Use
6425	South Unaweeep <u>13/</u>	C			40	5	3	C	014	03/01-02/28
6426	North Unaweeep <u>13/</u>	C			760	35	26 19	C C	078 078	04/10-05/09 11/01-11/30
6427	Turner Gulch	C			1363	60	37 48	C C	030 030	04/15-06/05 10/05-12/31
6428	Nelson	M			2461	175	150	C	050	05/01-05/28 11/15-12/26
6429	Dolores Point <u>8/</u>	I	DEF	IMP	7954	1001	350 170	C C	100 100	05/01-06/20 10/17-12/31
6430	Salt Wash	C			1298	55	10	C	100	03/01-05/15 12/01-02/28
6431	Cottonwood	C			1308	222	12 46	C C	100 100	12/01-12/20 03/01-05/10
6432	Beeman	C			783	33	13	C	100	04/16-05/31 10/16-11/15
6433	Hamilton	M	DEF	NOT	520	49	49	C	050	12/01-01/31
6434	Gateway <u>8/</u>	I	DEF	IMP	1197	90	20 70	C C	100 100	03/01-03/31 02/01-02/28
6501	Big Salt	I	RR		25888	1299	200 200	C C	087 087	03/01-05/31 10/17-02/28
6502	Coal Gulch-Roan Creek	I	RR	NOT	24875	1876	411 441 460	C C C	100 100 100	05/11-06/14 09/28-11/07 06/15-10/14
6503	Garr Mesa <u>12/</u>	M	DEF	IMP	6079	685	154	C	061	03/01-05/20
6504	Hunter Wash <u>8/</u>	I	RR	Part	16032	1411	1492 2221	S S	095 095	03/01-04/30 01/01-02/29
6505	Buniger	I	DEF	IMP	1388	60	10	C	100	05/01-10/31
6506	Lapham-Post <u>7/</u>	I	DEF	IMP	6074	544	180	C	088	05/16-10/20

Table E-1 (Continued)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Allotment		Management	Grazing	Management	Public	Author-	Livestock		Percent	
Number	Name	Category	System	Status	Acres	ized Use (AUMs)	Numbers	Kind	Federal	Period of Use
6507	Little Salt	I	RR	NOT	32985	2734	479	C	095	03/01-05/31
							479	C	095	12/01-02/28
6508	Mogensen	C			1537	67	67	C	100	12/01-12/31
6509	Mt. Garfield	I	RR	IMP	27249	1900	237	C	100	11/01-02/28
6601	Badger Wash	I	RR	IMP	8059	857	238	C	100	03/01-06/30
							1247	S	100	11/18-02/28
6602	East Salt	M	RR	IMP	94278	9930	10	H	100	06/01-02/28
							820	C	100	03/01-02/28
6603	West Salt Common <u>8/</u>	I	DEF	IMP	70271	8516	800	C	079	04/15-02/28
							18	H	079	05/01-11/30
6604	Crow Bottom <u>12/</u>	I	DEF	IMP	3936	198	49	C	100	01/01-04/30
6606	Corral Canyon-Mountain <u>7/</u>	M	DEF	IMP	9795	708	302	C	044	05/21-10/31
6607	Sphinx-Mitchell <u>7/</u>	M	DEF	IMP	4604	556	150	C	089	05/01-05/31
							295	C	089	10/01-12/22
6608	Dry Canyon-Demaree <u>7/</u>	M	DEF	IMP	9690	571	154	C	080	12/23-02/28
6609	Spann	C			26	8	1	C	100	03/01-10/31
6610	Maluy	M	RR	IMP	2064	168	140	C	100	04/12-05/17
6612	Baker-Bitter Creek	M	DEF	NOT	15594	1026	2655	S	080	03/01-05/06
							2655	S	080	11/27-02/28
6613	Rabbit Valley <u>10/</u>	M	BP	IMP	15848	1377	900	S	100	03/01-05/20
							1422	S	100	11/15-02/28
6614	Carbonera Rims <u>14/</u>	C			3266	93	1395	S	100	04/10-04/19
6616	Prairie Canyon	I	DEF	NOT	25645	668	89	C	095	05/01-12/27
6701	Bear Gulch	C			1013	58	27	C	062	05/25-07/20
							37	C	062	10/16-11/20
6702	Berry Homestead	M	DEF	Part	2935	218	134	C	053	05/01-05/31
							181	C	053	11/15-12/31
6703	Brink Pedigo Gulch	I	DEF	NOT	4937	111	134	C	100	10/16-10/24
							161	C	044	05/01-05/31

Table E-1 (Continued)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Allotment		Management	Grazing	Management	Public	Author-	Livestock		Percent	
Number	Name	Category	System	Status	Acres	ized Use (AUMs)	Numbers	Kind	Federal	Period of Use
6704	Corcoran Wash	I	RR	IMP	9776	1296	400 400	C C	081 081	05/01-06/15 10/16-12/31
6705	Brush Mountain Common	I	DEF	NOT	2278	867	353	C	100	07/01-10/15
6706	Burdick E. of Ranch	I	DEF	IMP	1287	90	60 90	C C	100 100	04/16-05/31 11/01-11/30
6707	Burdick Homestead	C			115	21	5	C	100	06/27-11/01
6709	Carr Creek	C			710	153	164	C	062	10/01-11/15
6710	Conn Creek	C			1100	96	96	C	100	04/01-04/30
6711	Conn Mountain Common	C			168	90	18	C	100	06/01-10/31
6712	Coon Hollow Common ^{12/}	I	DEF	IMP	18561	1218	394	C	084	10/25-12/19 04/15-05/31
6713	Winter Flats-Deer Pk.	M	BP	IMP	27055	2505	20 100 650	C Y C	100 100 100	03/01-05/31 04/10-05/31 11/16-02/28
6714	Dougherty Gulch	I	DEF	NOT	3117	140	31	C	100	06/01-10/15
6715	Dry Fork	M	DEF	NOT	10497	564	100 200 124	C C C	038 038 038	03/01-04/15 04/16-06/15 06/16-09/30
6716	East End Cow Mtn.	I	DEF	NOT	583	106	53	C	100	06/01-07/30
6718	East Spear Common	I	DEF	Part	13601	844	429 200	C C	100 100	04/16-05/31 11/01-11/30
6719	Eby Point ^{1/}	C			602	63	16	C	100	06/16-10/14
6720	Etcheverry	C			550	94	750	S	020	02/01-02/28 03/01-04/30
6721	Head of Carr Creek	I	DEF	NOT	5804	250	55	C	100	06/16-11/01
6722	Carbon	M	DEF	NOT	2155	413	82	C	100	05/31-10/31
6723	Henderson Ridge Common	I	DEF	NOT	982	303	76	C	100	06/16-10/30
6724	Kimball Creek	M	RR	NOT	12283	194	48 50	C C	100 100	03/01-05/30 11/01-11/30

Table E-1 (Continued)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Allotment		Management	Grazing	Management	Public	Author- ized Use	Livestock		Percent	
Number	Name	Category	System	Status	Acres	(AUMs)	Numbers	Kind	Federal	Period of Use
6725	4-A Mountain	M	DEF	NOT	854	316	4 150	H C	050 050	06/16-10/15 06/16-10/15
6726	Horse Mountain	I	DEF	NOT	678	100	25	C	100	06/16-10/15
6727	I.A.E. of Ranch	I	DEF	Part	1934	147	64 96	C C	071 071	05/01-05/30 11/01-12/15
6728	Kimball Foothill Common	C			462	49	92	C	100	05/16-05/31
6729	Kimball Mountain	M	DEF	NOT	837	200	40	C	100	06/01-10/31
6732	Logan End Common ^{15/}	C	DEF	NOT	1841	365	73	C	100	06/01-10/31
6733	Logan Gulch	M	DEF	IMP	3927	508	346	C	100	05/05-06/18
6734	Logan Wash Common	I	DEF	Part	1524	21	22	C	050	04/05-05/31
6735	Lower Brush Mountain	C			497	128	32	C	100	06/16-10/15
6736	Lower Carr Creek Common	C			329	30	65	C	100	11/01-11/30
6737	Lower Roan Creek Common	I	DEF	NOT	5012	206	138 194	C C	100 100	05/16-06/15 10/16-10/22
6738	Lower 4-A	I	DEF	NOT	2258	633	114 150	C C	100 100	06/26-11/02 05/26-06/25
6739	McCurdy Wash	I	DEF	Part	804	40	10 40	C C	100 100	04/01-04/30 04/01-04/30
6740	Homestead ^{1/}	M	DEF	NOT	4410	210	75 135	C C	070 070	05/07-06/24 05/15-06/24
6741	Middle Cow Ridge	I	DEF	NOT	1088	285	130	C	073	06/16-09/15
6742	Paddock	M	DEF	Part	1710	245	100	C	057	05/01-11/15
6743	Parkes Place	C			120	16	10 11	C C	100 100	05/16-06/15 10/16-10/31
6744	Roan Creek	I	RR	NOT	9261	448	206	C	100	06/15-11/10
6745	Round Mountain ^{16/}	I	RR	Part	17626	1148	226 344	C C	100 100	04/25-06/25 10/01-11/30

Table E-1 (Continued)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Allotment		Management	Grazing	Management	Public	Author-	Livestock		Percent	
Number	Name	Category	System	Status	Acres	ized Use (AUMs)	Numbers	Kind	Federal	Period of Use
6746	Stoner	I	DEF	NOT	622	35	130 10 60	C C C	015 015 015	06/01-06/24 06/25-09/30 10/01-11/15
6747	Tater Hills	I	DEF	IMP	1709	177	177	C	100	05/10-06/09
6748	Upper Brush Mountain	M	DEF	NOT	950	306	7 190	H C	038 038	06/10-10/10 06/10-10/10
6749	Walker	I	DEF	NOT	5730	169	87 165	C C	033 033	06/16-10/15 10/16-11/15
6750	Webber	C			190	32	50	C	025	05/01-05/31 10/01-11/15
6751	West Cow Mountain	I	DEF	NOT	1197	401	149	C	084	06/25-09/30
6752	West Logan Wash	I	DEF	Part	230	28	14	C	100	04/01-05/31
6753	West Spears	I	DEF	NOT	6551	470	100 223	C C	100 100	11/01-12/15 05/01-06/13
6754	Whittaker Flats ^{1/}	M	DEF	IMP	3270	292	18 723	C S	100 100	11/15-01/30 01/01-02/21
6755	4-A Place	C	DEF	IMP	310	34	34	C	100	05/25-06/24
6801	Sunnyside Common ^{17/}	I	RR	IMP	7403	1077	354 180 946	C C S	092 092 092	04/16-06/25 10/18-12/31 12/22-01/27
6802	Bald Hill Common ^{1/}	I		NOT	800	234	246 930	C S	100 100	06/10-06/30 10/17-10/26
6803	Grassy Gulch Common ^{1/}	M		NOT	445	93	118	C	100	06/01-06/15
6805	Hawxhurst Common ^{1/}	M		NOT	4180	274	280	C	100	05/20-07/04
6806	Salt Creek Common	C			2596	78	107	C	070	05/15-06/15
6807	Spring Creek to Coon Creek Common	I	DEF	IMP	4730	513	181 185	C C	100 100	05/16-06/30 10/01-10/08
6808	White Mountain Common	I	DEF	IMP	2932	401	40 163	C C	100 100	04/16-06/15 05/02-06/30

Table E-1 (Continued)

Number	Allotment Name	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Management Category	Grazing System	Management Status	Public Acres	Author-ized Use (AUMs)	Livestock Numbers	Kind	Percent Federal	Period of Use
6809	Wild Country Common	I	DEF	Part	7974	746	477	C	073	04/15-06/26
6810	Plateau Creek <u>18/</u>	C			85	14	4	C	100	06/01-09/15
6811	Lyons <u>12/</u>	I	DEF	IMP	896	202	815 851	S S	077 077	12/05-01/19 12/01-01/23
6812	Anderson Ind. <u>12/</u>	I	DEF	IMP	1430	149	835 870	S S	100 100	01/20-02/19 12/23-01/23
6813	Red Mountain	C			464	12	100	S	030	05/01-06/30
6814	Guthrie Place	C			160	18	12	C	075	06/01-07/31
6815	Webb Isolated Tracts	C			200	17	3	C	100	04/16-09/30
6816	Bevan	C			120	18	6	C	100	06/15-09/15
6817	Clifton	C			660	26	65	S	100	01/01-01/31 04/16-05/15
6818	Davis	C			500	35	27 29	C C	042 042	05/01-05/31 11/01-12/30
6819	Ervin	C			30	10	1 9	H C	020 020	05/01-10/31 05/01-10/31
6820	Gaptor	C			560	84	40	C	070	05/01-06/15 10/16-11/30
6821	Fetters	C			40	12	2	C	100	05/01-10/30
6823	Halfway House <u>19/</u>	M	DEF	IMP	768	52	72	C	072	05/01-05/31
6824	Collier Creek	C			80	26	47	C	100	06/08-06/15 10/10-10/17
6825	Hawkins	C			40	30	30	C	100	04/16-05/15
6826	Hawkins	C			160	46	57	C	033	07/07-09/19
6827	Clover Gulch	C			730	35	17	C	100	04/16-06/16
6828	Hight	C			730	4	2	C	100	06/01-07/31
6829	Hunter	C			200	35	10	C	100	06/01-09/15

Table E-1 (Continued)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Allotment		Management	Grazing	Management	Public	Author-	Livestock		Percent	
Number	Name	Category	System	Status	Acres	ized Use (AUMs)	Numbers	Kind	Federal	Period of Use
6830	Horizon	C			80	14	30	C	010	05/16-09/30
6832	Leon <u>20/</u>	C			280	85	21	C	100	06/15-10/15
6833	Kinney <u>1/</u>	C			1430	80	52	C	100	06/01-06/30 10/01-10/16
6834	Dry Kimball <u>1/</u>	C			820	11	56	C	028	05/26-06/15
6835	Lloyd <u>1/</u>	C			2140	111	21	C	100	05/22-10/31
6836	Long	C			280	45	150	C	020	05/16-06/30
6837	Heely	C			1870	134	127	C	077	04/20-05/31
6838	Lorimor	C			200	20	10	C	064	06/01-09/01
6839	Collier	C			240	97	24	C	100	06/16-07/05
6840	Milholland	C			280	27	90	C	020	05/01-06/15
6841	Hittle Place	C			440	75	15	C	100	05/16-10/15
6842	Nichols	C			598	11	42	C	017	05/01-06/15 06/16-06/26
6843	Big Park	M	DEF	NOT	11610	759	120 540 782	C C C	050 050 050	04/01-04/14 04/15-04/30 05/01-06/15
6844	Lower Rapid-Cottonwood <u>1/</u>	M	DEF	IMP	3517	168	40 108	C C	100 100	10/01-11/15 04/15-05/14
6845	Chalk Mountain	M			1493	70	13	C	100	05/20-10/31
6846	Robbins	C			720	113	113	C	100	05/01-05/30
6847	Jerry Gulch	I	DEF	IMP	1771	158	810	S	075	04/22-05/30
6848	Berthod Place	C			160	19	24	C	034	07/10-09/18
6849	McCurry	C			80	16	28 50	C C	010 010	05/16-06/15 06/16-08/31
6850	Brown Place	C			636	8	8	C	100	03/28-04/27

Table E-1 (Continued)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Allotment		Management	Grazing	Management	Public	Author-	Livestock		Percent	
Number	Name	Category	System	Status	Acres	ized Use (AUMs)	Numbers	Kind	Federal	Period of Use
6851	Baldrige Mesa	C			1493	16	9	C	100	04/10-05/31
6853	Molina Place	C			130	30	15	C	100	04/01-05/31
6854	East of Collbran	C			1080	84	12	C	100	05/01-11/30
6855	Charlesworth Isolated Tract	C			120	7	2	C	100	04/16-07/30
6856	Ella <u>21/</u>	C			40	4	5	S	100	06/01-10/14
6857	Mormon Mesa <u>21/</u>	C			200	29	24	C	100	06/01-06/14

1/ The proposed livestock use listed in the grazing ES was in error.

2/ The authorized use was not reduced because of additional forage produced by brush treatment and reseeding on the allotment in 1981.

3/ Allotment was reduced in 1984 based upon studies and agreements with the operators.

4/ The authorized use and the percent public land were changed based on a 1980 range survey of the public and private land.

5/ The authorized use was not reduced because errors were made in calculating the available AUMs in the grazing ES. When errors were corrected, no reduction was necessary.

6/ The authorized use was reduced because the Rattlesnake allotment (6168) was created from the Colorado River allotment after the final grazing ES creating two allotment from one.

7/ A range survey was completed on the allotment in 1979 which showed the allotment produced adequate forage. Therefore, no reduction was made.

8/ Allotments on which the permittees are taking voluntary reductions in authorized use. Final decisions on determination of authorized use was completed in 1986 following 5 years monitoring.

9/ The authorized use was not reduced because a 1979 range survey showed no need for a reduction and the class of livestock was changed.

10/ The authorized use for this allotment was determined through a 1979 range survey.

11/ The stocking rate was determined through range studies completed on the allotment over the past three years.

12/ The stocking rate was reduced based on the 1979 range survey and agreed to by the permittees.

13/ The authorized use was changed based on a 1979 range survey and grazing use agreement.

14/ Authorized use was reduced because part of the allotment was transferred to the West Salt (6603) allotment.

15/ The reduction listed in the grazing ES was too small to be significant and could not be reasonably supported by the accuracy limits of the range analysis.

16/ The stocking rate was not reduced due to constraining language in the cooperative agreement that created the Little Book Cliffs Wild Horse Range. Allotment has been in nonuse most of the time, and we have not been able to do adequate studies.

17/ Livestock use in this allotment is based on utilization studies, and the livestock are removed each year when 50 percent utilization is reached.

18/ The allotment name was changed from Alexander to Plateau Creek due to a ranch transfer.

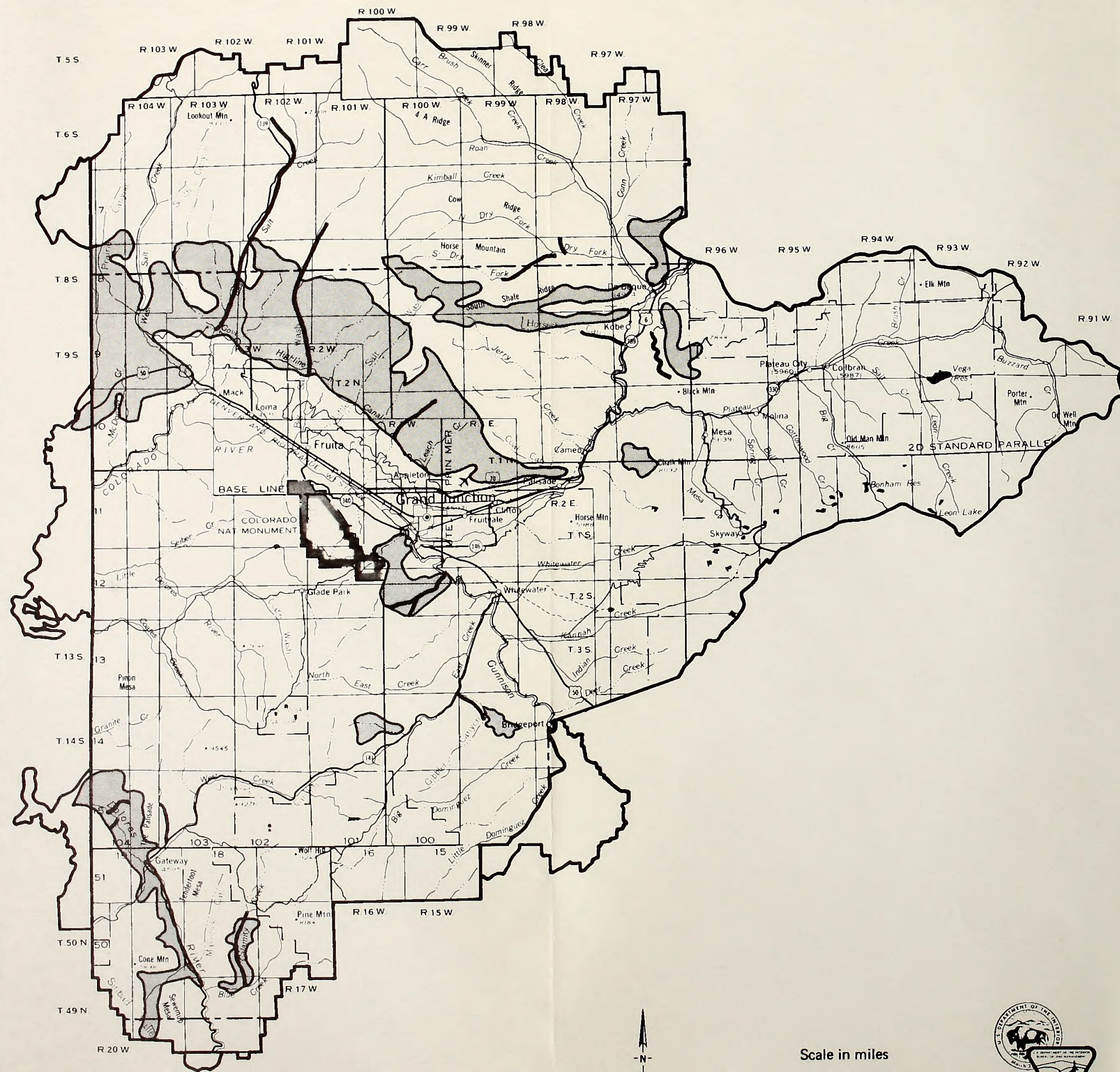
19/ A range survey in 1979 disclosed a need to change the percent public land.

20/ The allotment name was changed from Jones to Leon and combined with the Moss (6852) allotment.

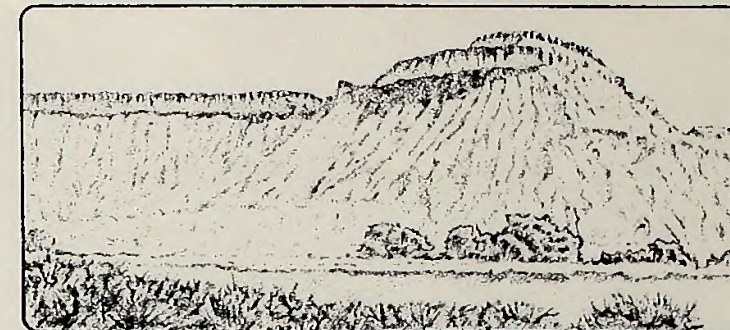
21/ Allotments were created from public land that was unallotted for grazing at the time of the grazing ES.

GRAND JUNCTION RESOURCE AREA

MAPS





GRAND JUNCTION RESOURCE AREA



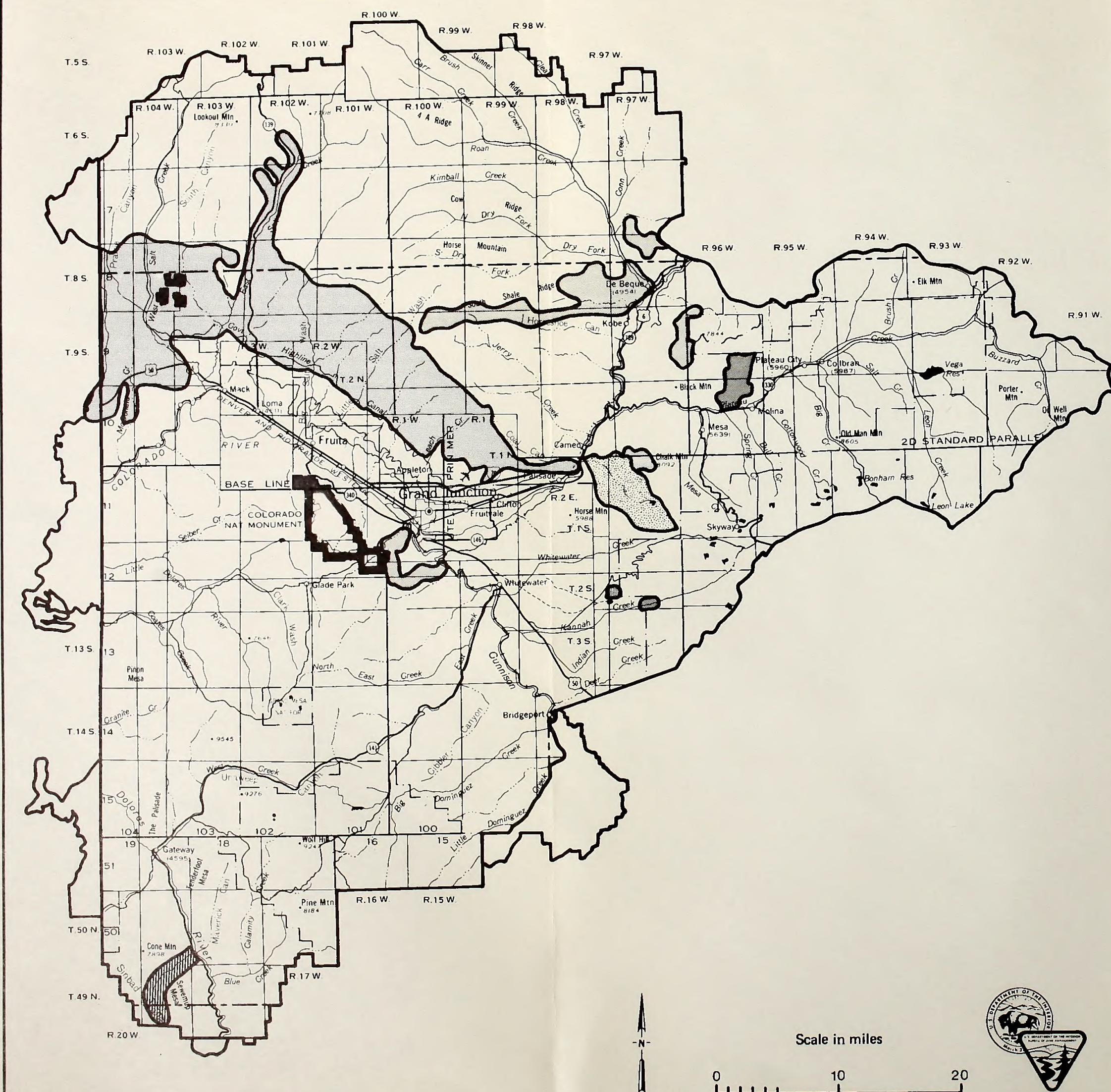
Resource Management Plan

WATER RESOURCES MANAGEMENT

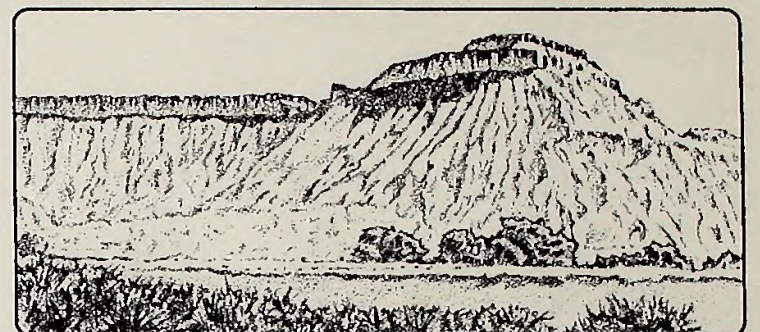
-  Stream channel treatment areas
-  Sediment reduction areas








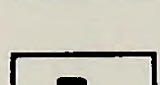
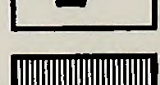


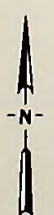
GRAND JUNCTION RESOURCE AREA



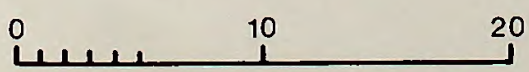
Resource Management Plan

WATER RESOURCES MANAGEMENT

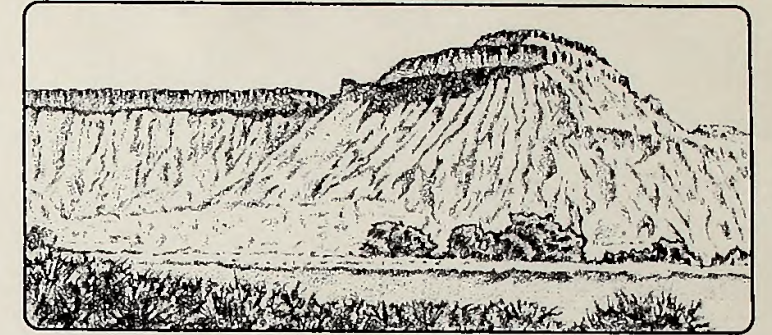
-  Saline reduction areas
-  Palisade municipal watershed
-  Grand Junction municipal watershed and Jerry Creek Reservoir
-  Badger Wash study area
-  Sinbad Valley salinity project



Scale in miles






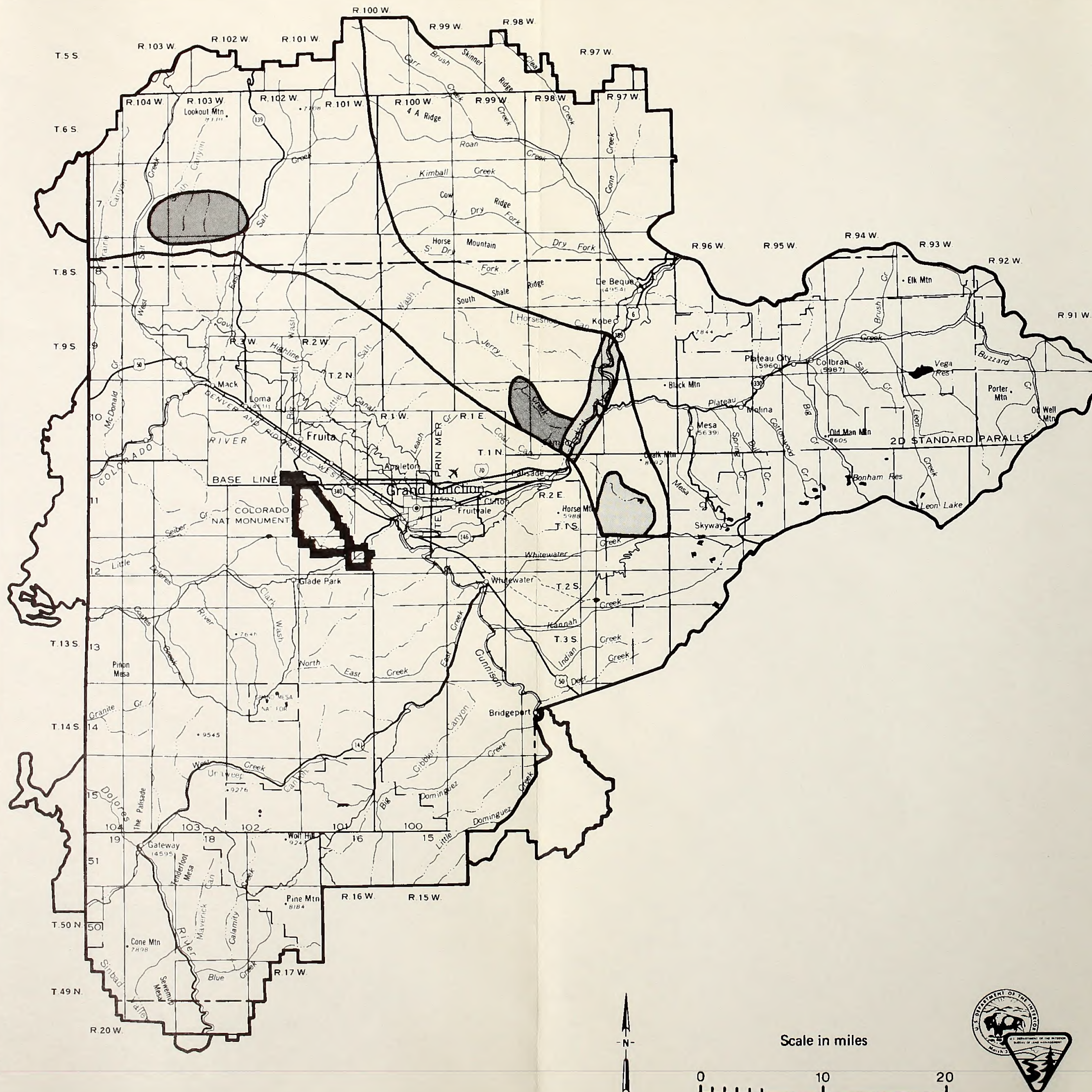
GRAND JUNCTION RESOURCE AREA

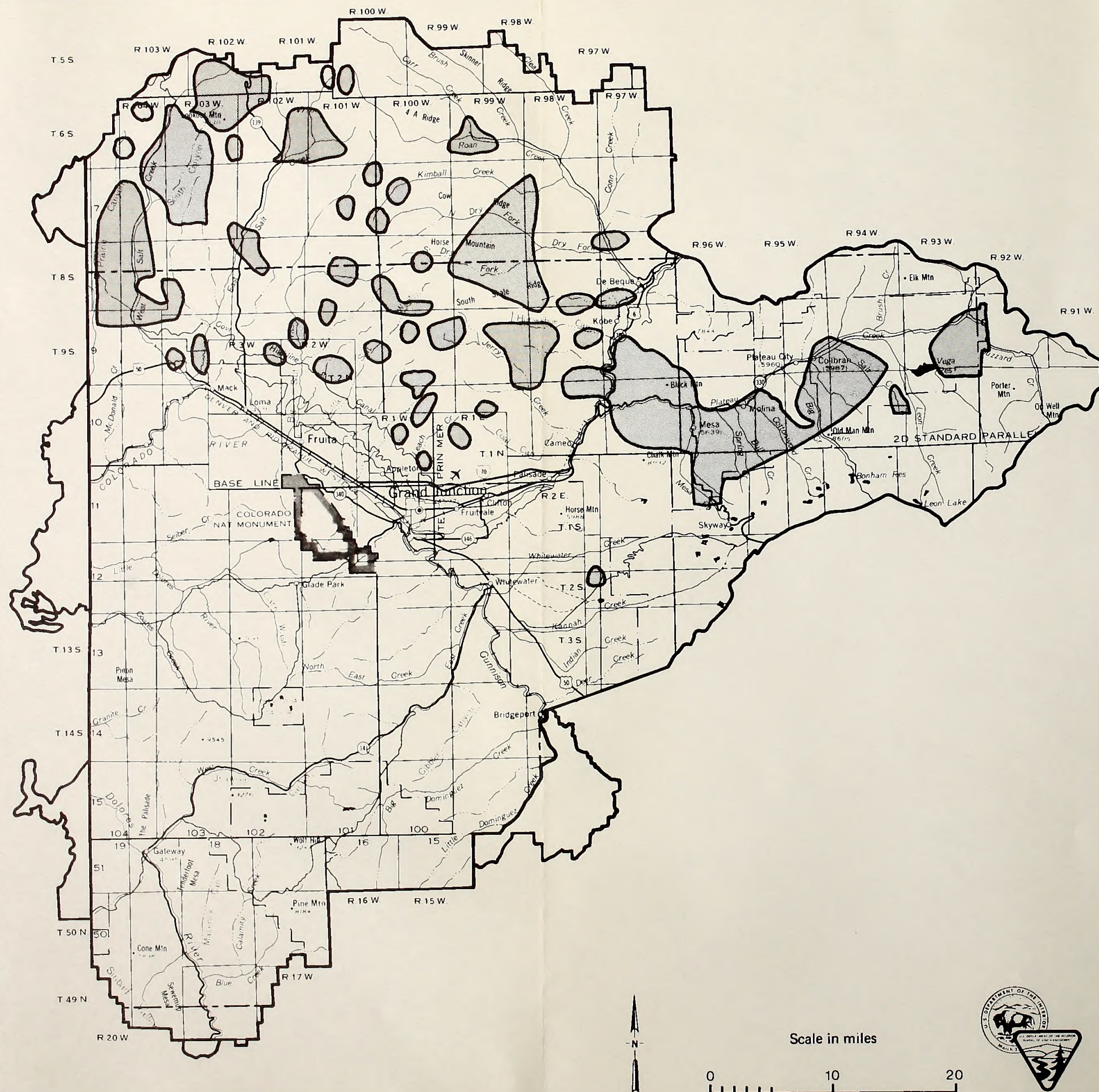


Resource Management Plan

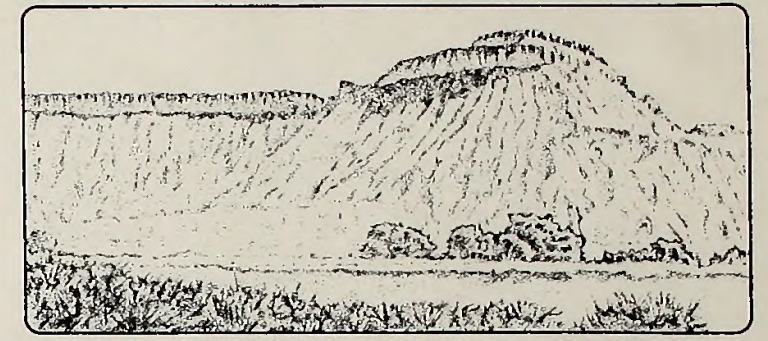
COAL MANAGEMENT

-  Acceptable for further coal leasing consideration
-  Unsuitable
-  Unsuitable (pending Congressional action on wilderness recommendations)





GRAND JUNCTION RESOURCE AREA

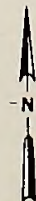


Resource Management Plan

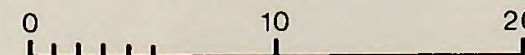
OIL AND GAS MANAGEMENT

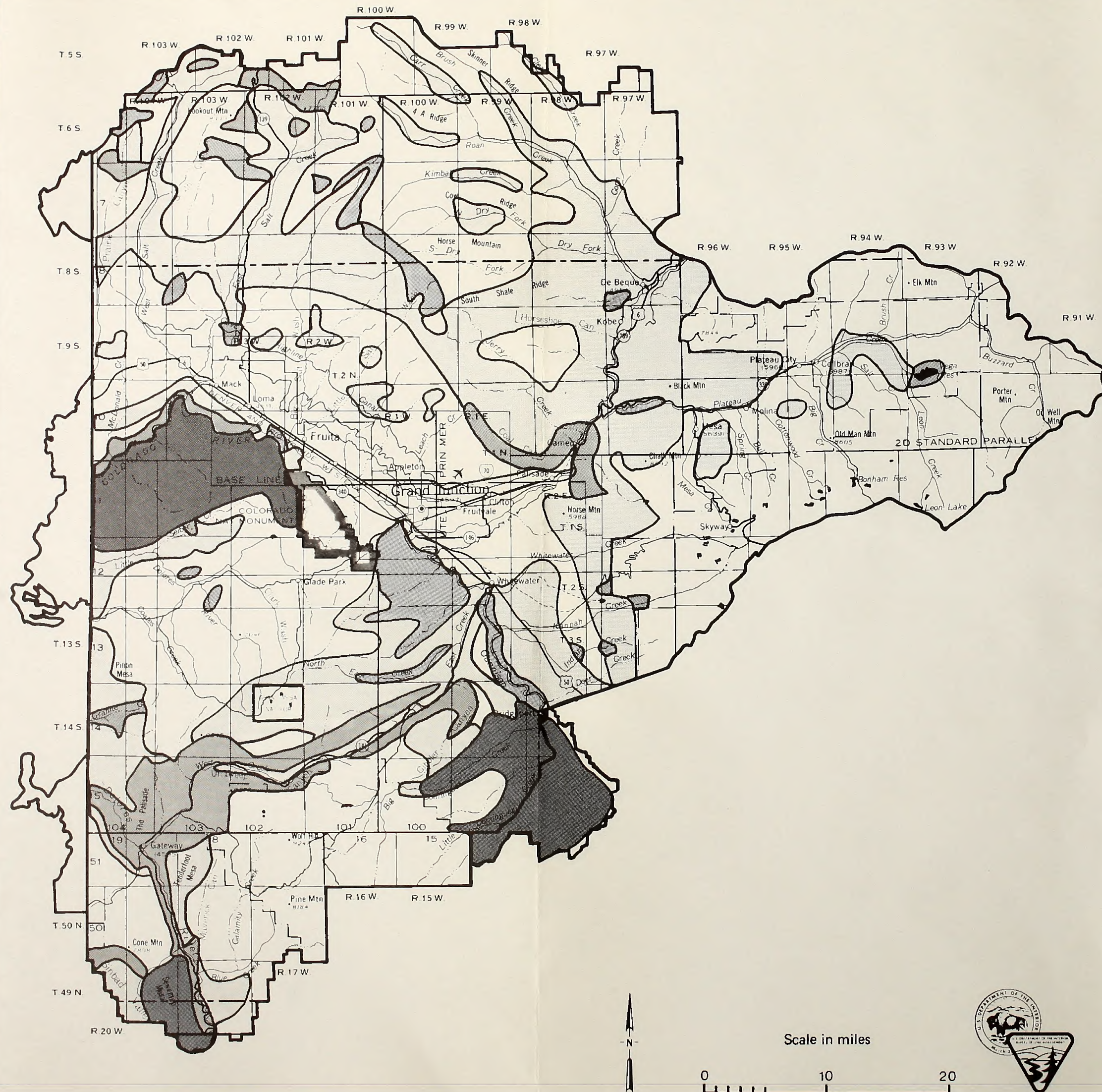


Known geologic structures (KGSs)

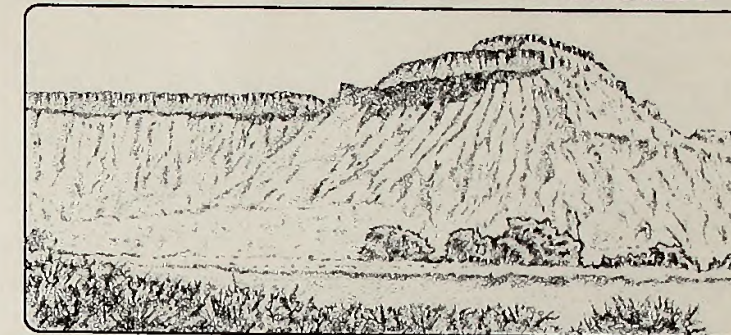


Scale in miles






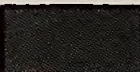


GRAND JUNCTION RESOURCE AREA

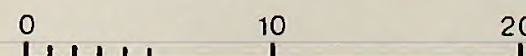


Resource Management Plan

OIL AND GAS MANAGEMENT

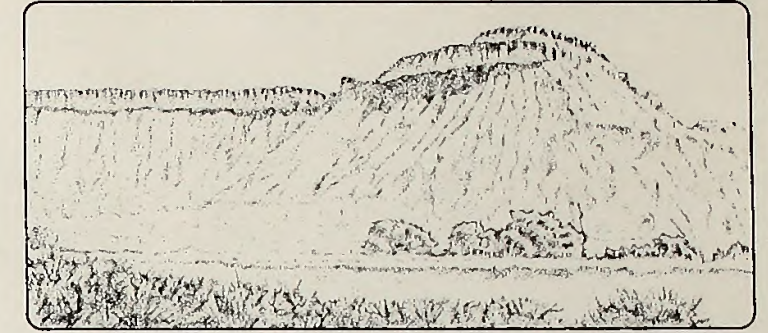
-  Open - without stipulations
-  Open - no surface occupancy stipulation
-  Open - other stipulations (excluding perennial streams and areas with slopes greater than 40%)
-  Closed to leasing

Scale in miles





GRAND JUNCTION RESOURCE AREA

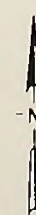


Resource Management Plan

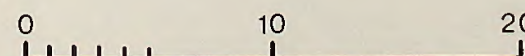
MINERAL MATERIALS MANAGEMENT

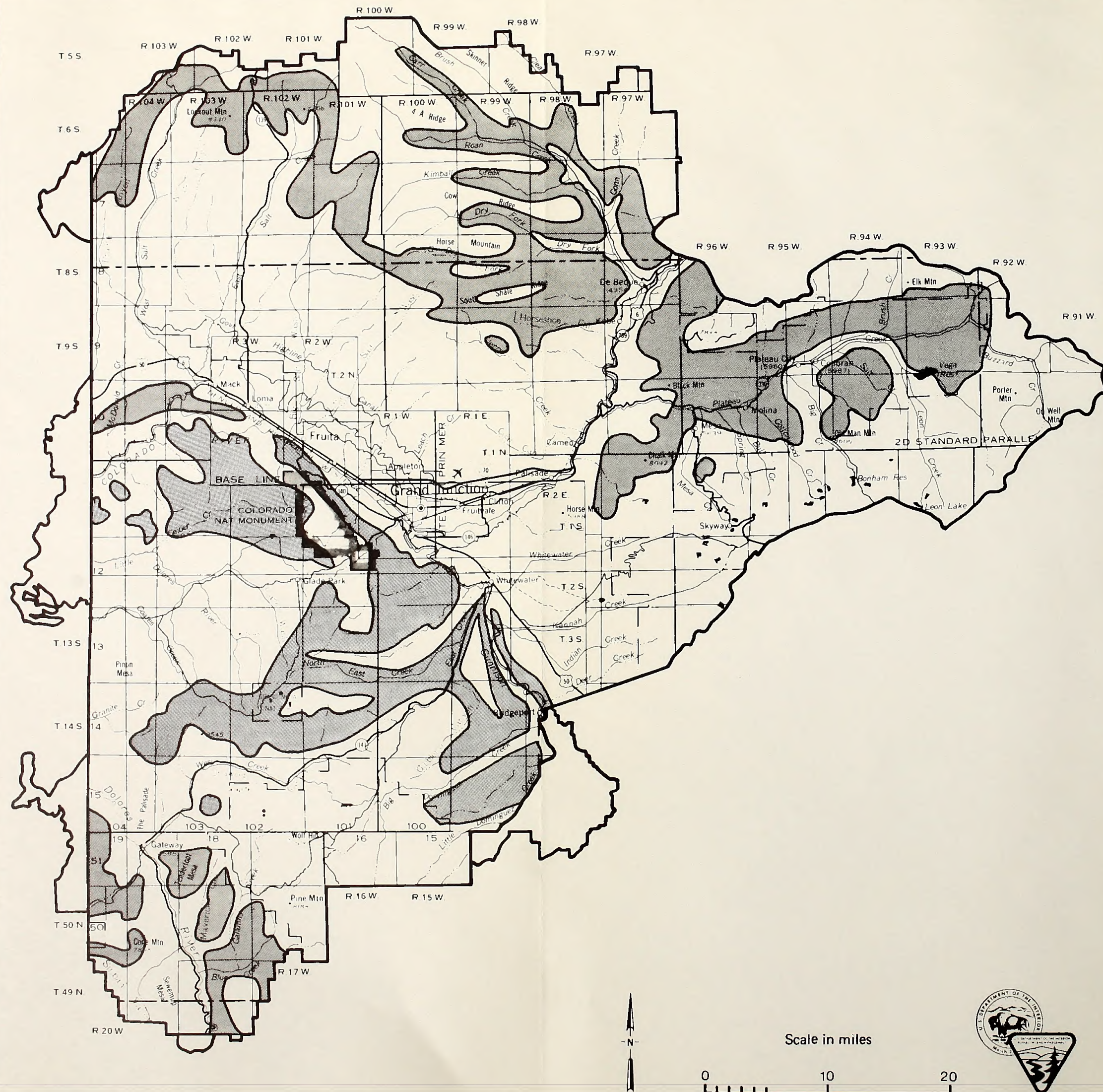


Areas closed to mineral material disposal

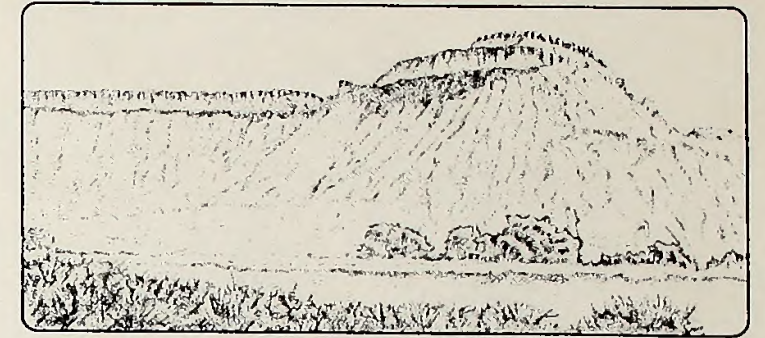


Scale in miles





GRAND JUNCTION RESOURCE AREA



Resource Management Plan

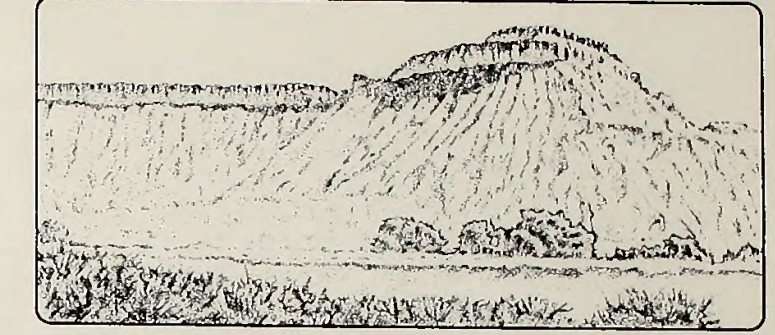
PALEONTOLOGICAL MANAGEMENT



Class I paleontological areas



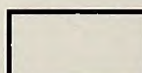


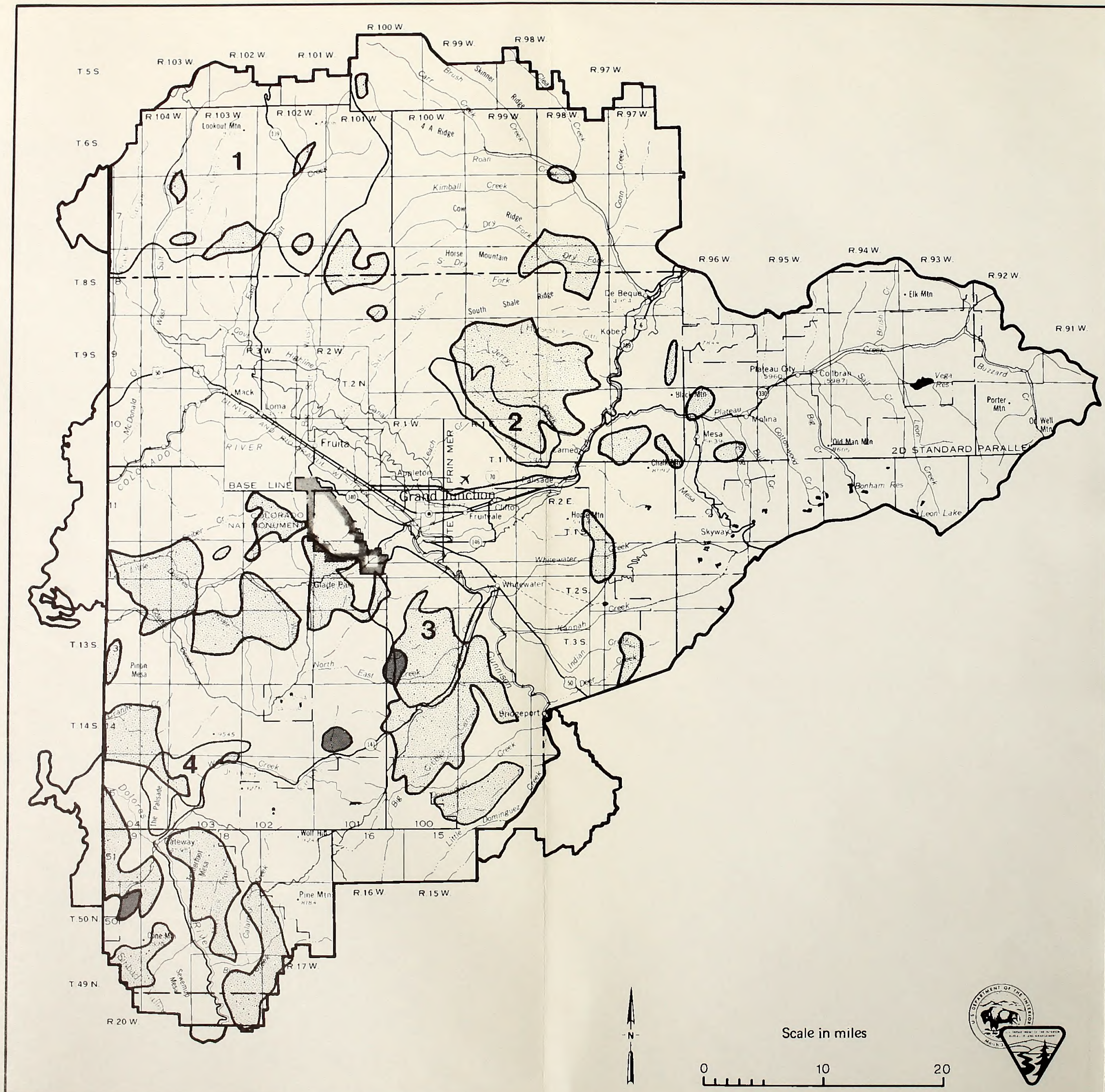
GRAND JUNCTION RESOURCE AREA



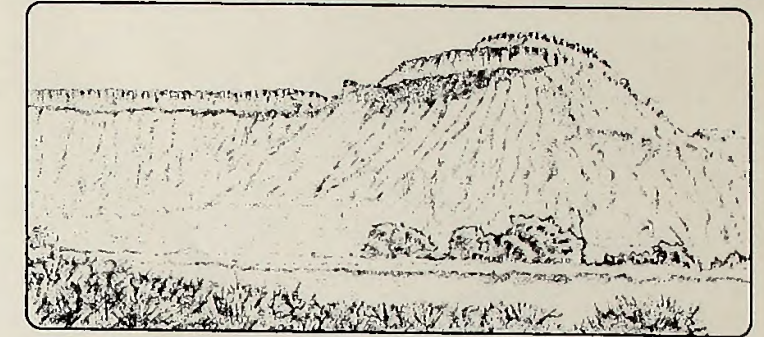
Resource Management Plan

FOREST MANAGEMENT

-  Commercial forest land suitable for management
-  Pinyon - juniper woodlands suitable for management
-  Pinyon - juniper woodlands suitable for management with special restrictions
 1. Big Salt
 2. Little Book Cliffs Wild Horse Area
 3. Bang's Canyon
 4. The Palisade



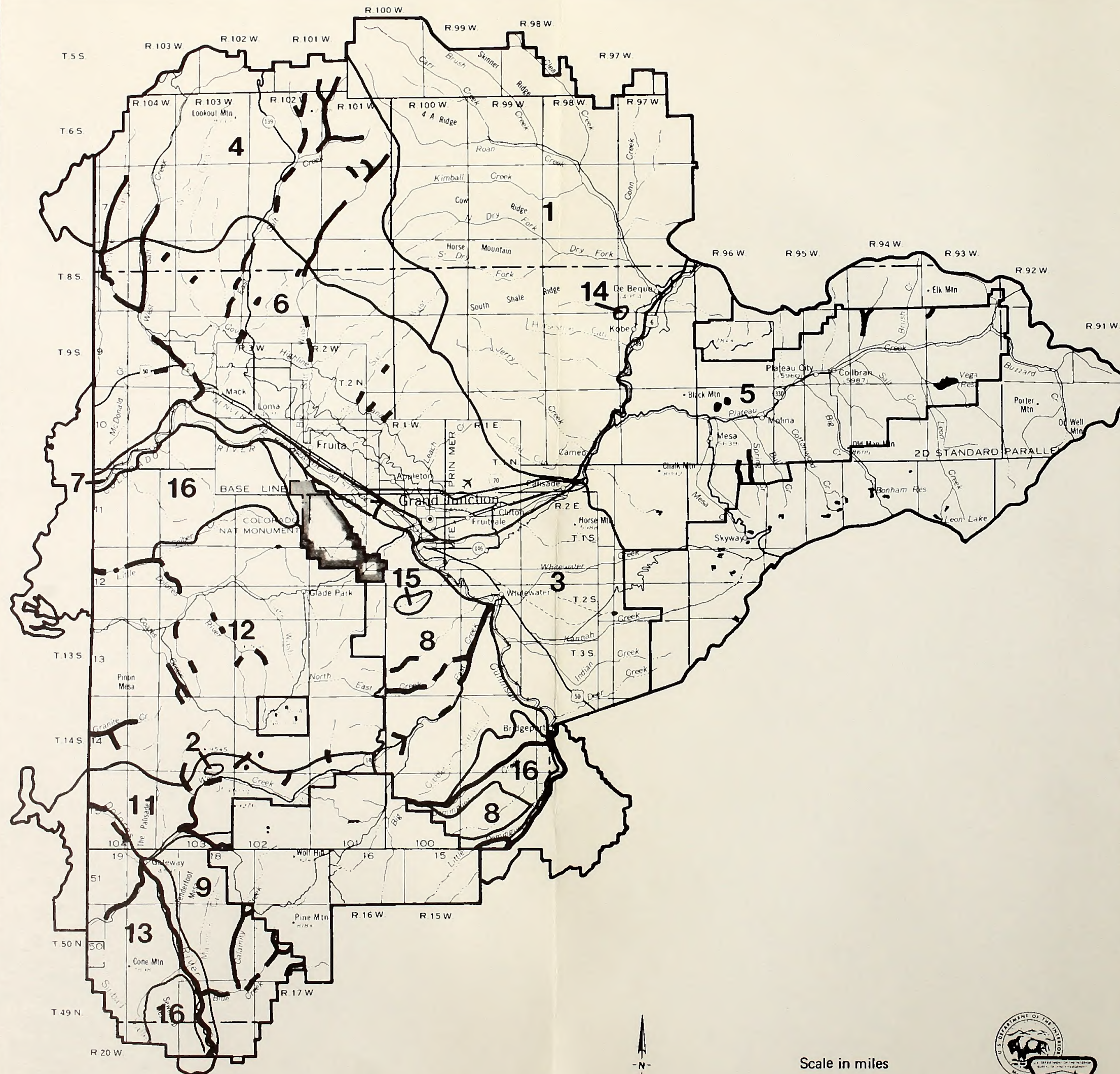
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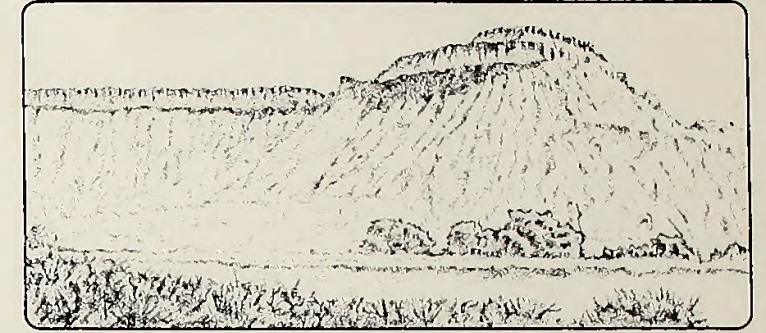
Resource Management Plan

WILDLIFE MANAGEMENT Habitat Management Plans

1	Roan Creek	9	Ute to Mesa Creek
2	Unaweep Seep		Aquatic - Riparian
3	Kannah Creek	11	Unaweep to Dugway
4	Book Cliffs to Roan Cliffs	12	Glade Park
5	Collbran	13	Dolores West
6	Grand Valley	14	Pyramid Rock
7	Colorado River	15	Rough Canyon
8	Bang's — Dominguez	16	Wilderness


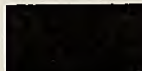
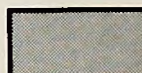



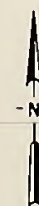
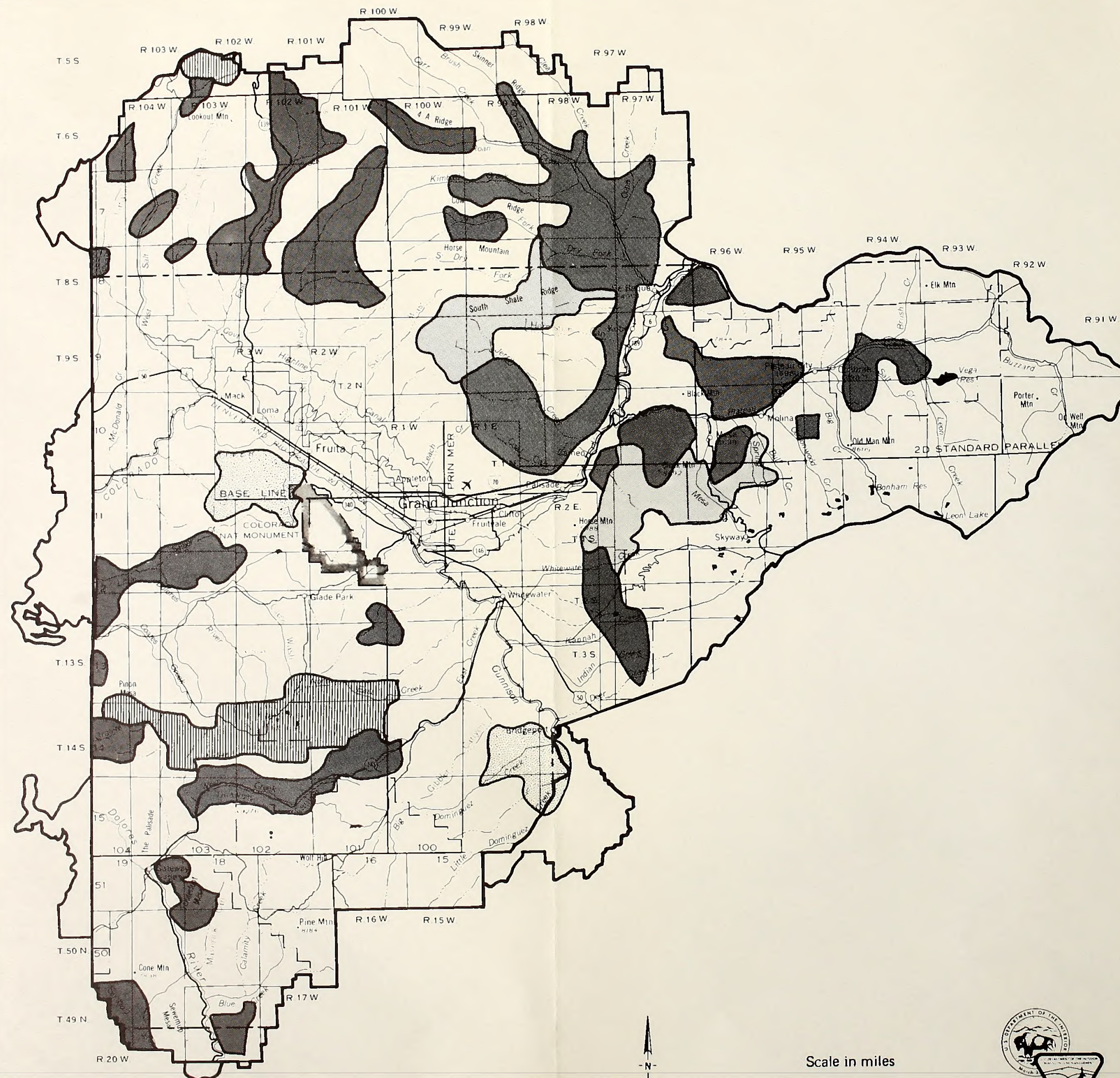
GRAND JUNCTION RESOURCE AREA



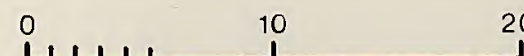
Resource Management Plan

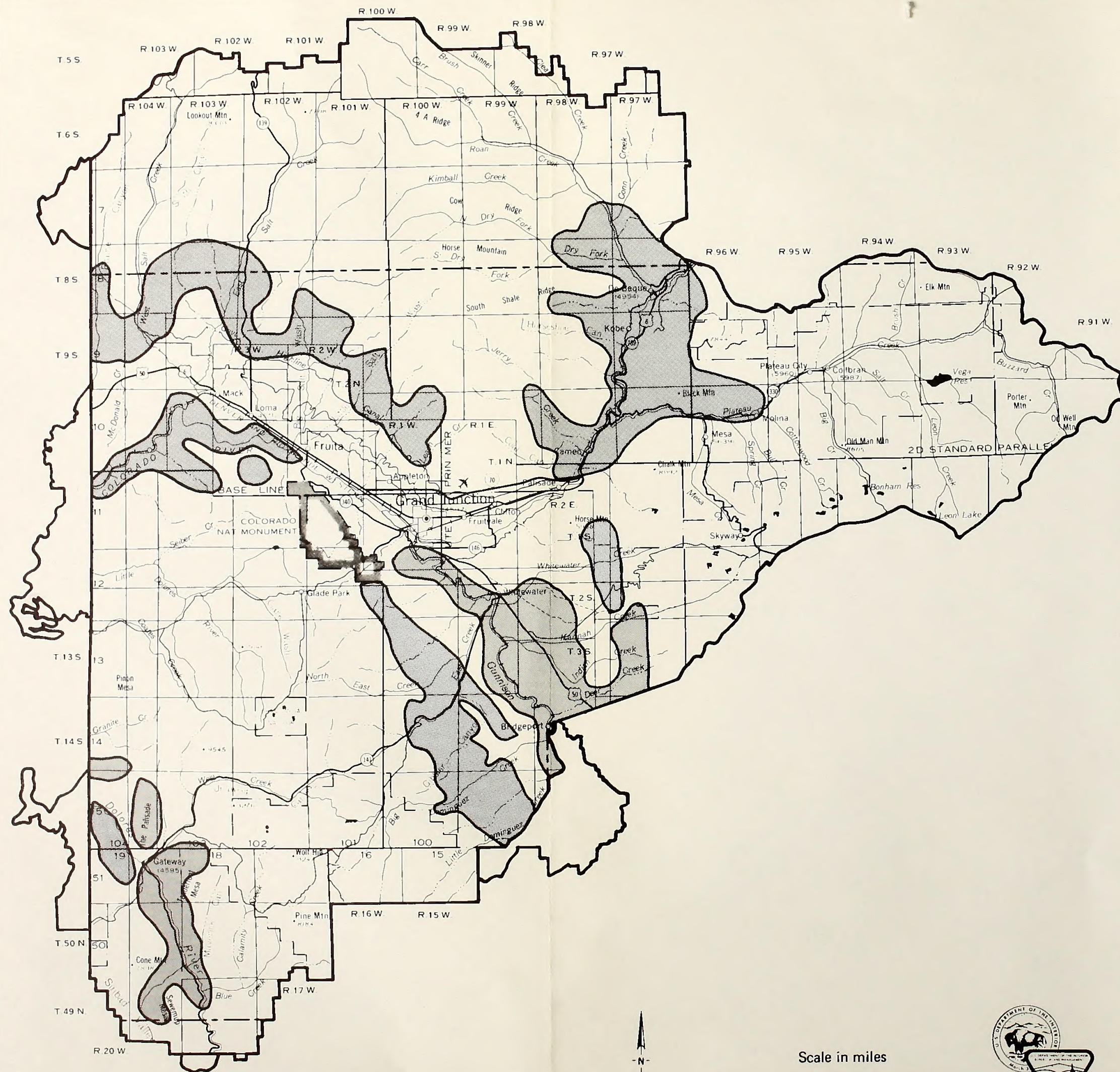
WILDLIFE MANAGEMENT Protective Habitat Management

-  Bighorn sheep range (Dec 1 — May 1)
-  Deer and/or elk critical winter range (Dec 1 — May 1)
-  Deer or deer and elk migration area (Dec 1 — May 1)
-  Elk calving area (May 15 — June 15)

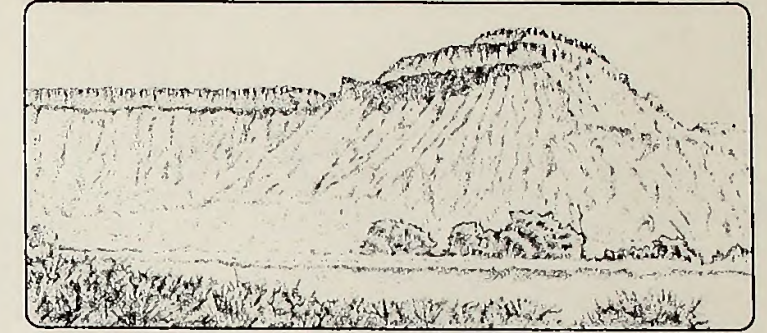


Scale in miles





GRAND JUNCTION RESOURCE AREA

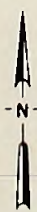


Resource Management Plan

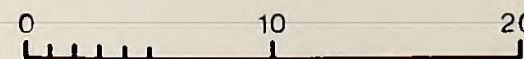
THREATENED AND ENDANGERED SPECIES MANAGEMENT Protective Habitat Management

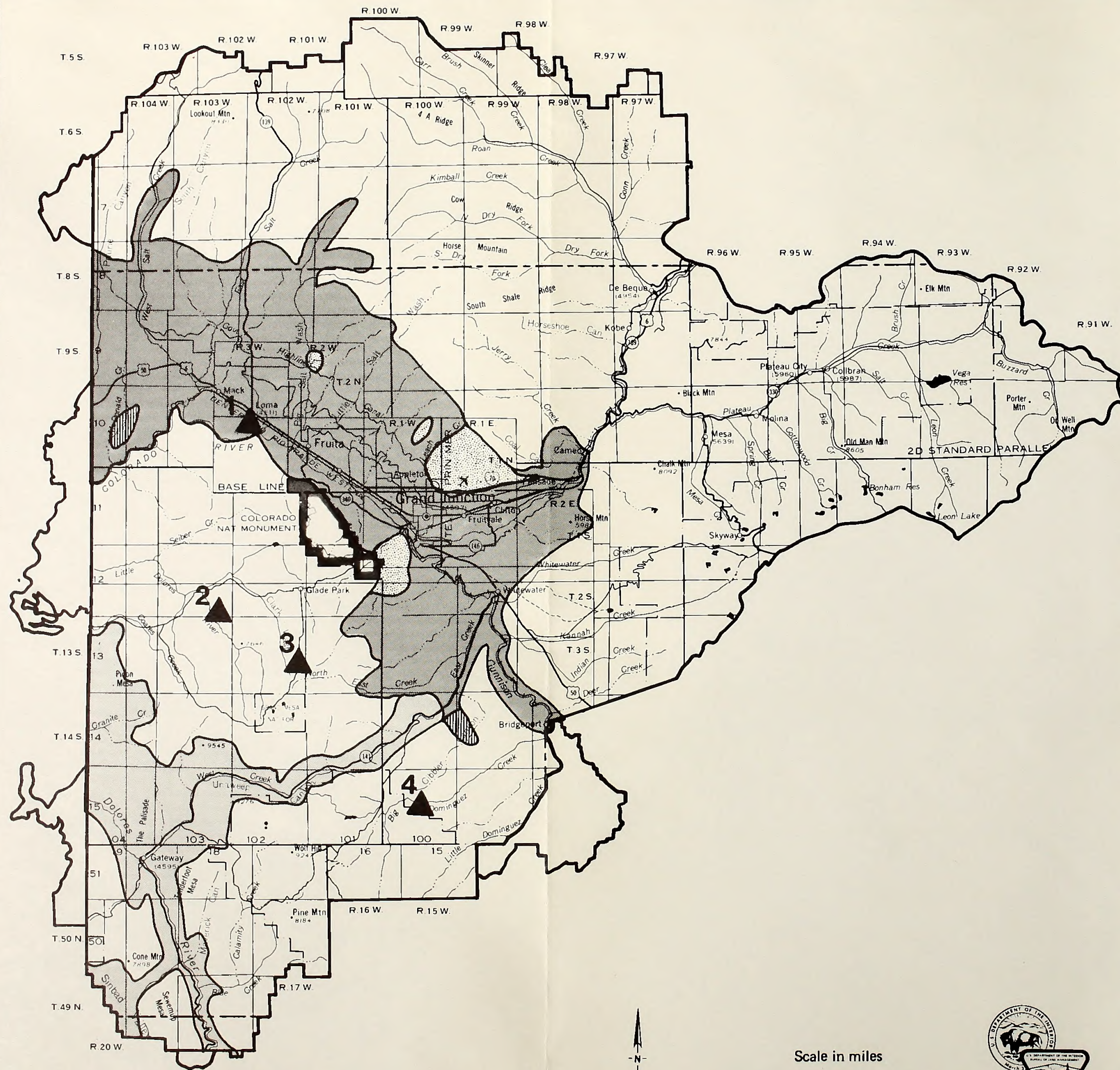


Seasonal and no surface occupancy
stipulation areas

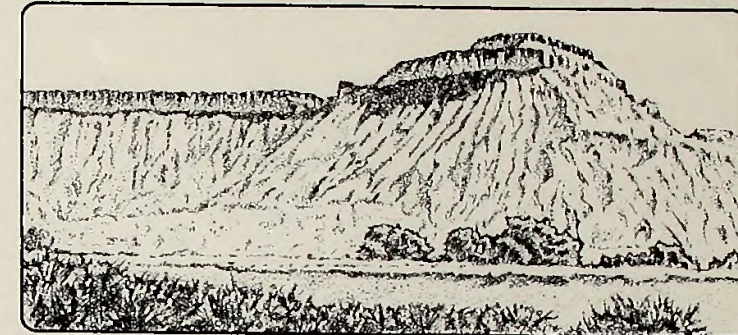


Scale in miles










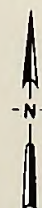
GRAND JUNCTION RESOURCE AREA



Resource Management Plan

RECREATION MANAGEMENT

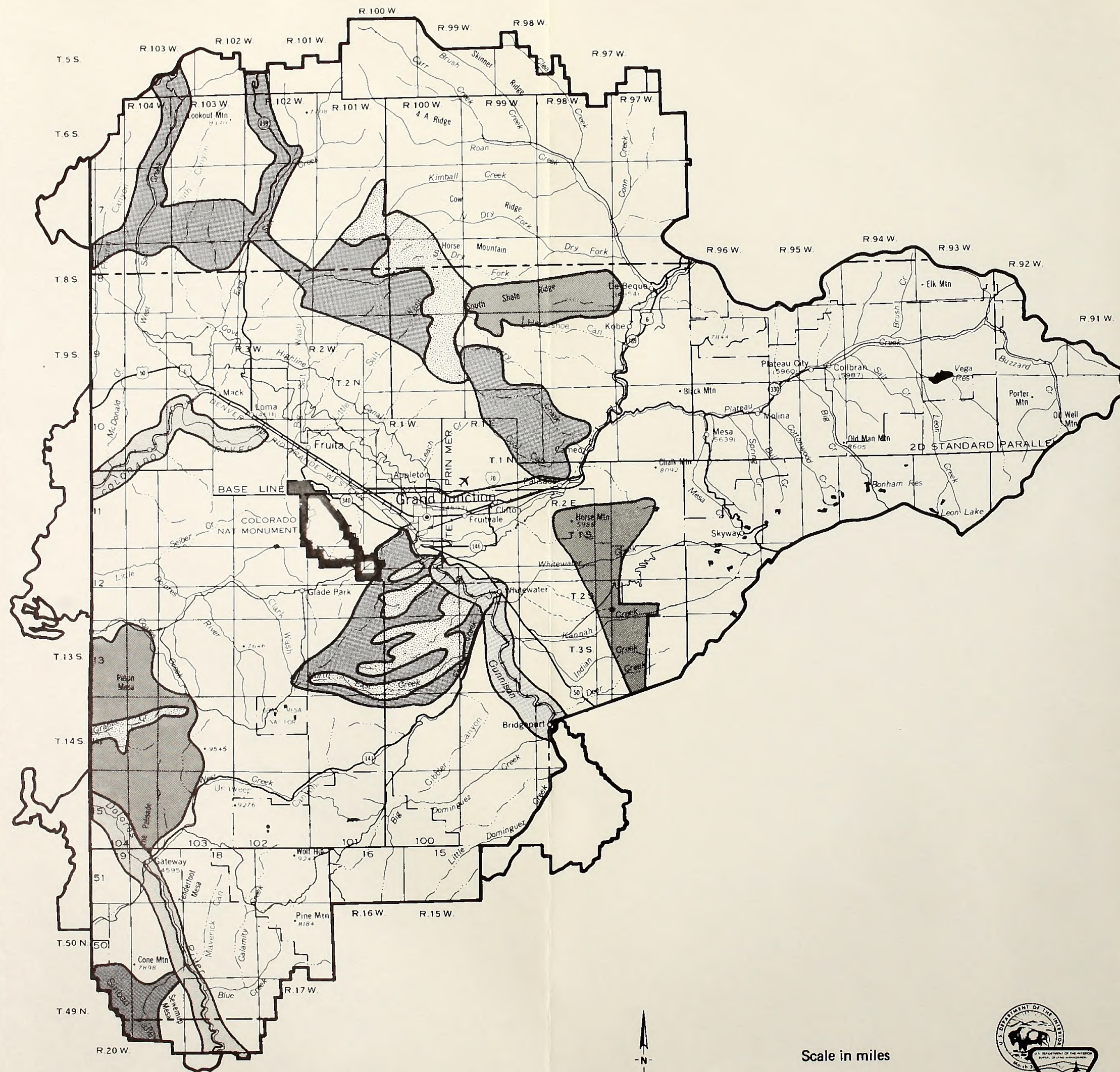
-  Gateway Intensive Recreation Management Area (IRMA)
-  Grand Valley Intensive Recreation Management Area (IRMA)
-  No shooting zones
-  Group use areas
-  Developed recreation sites
 1. Loma boat launch
 2. Miracle Rock
 3. Mud Springs
 4. Dominguez



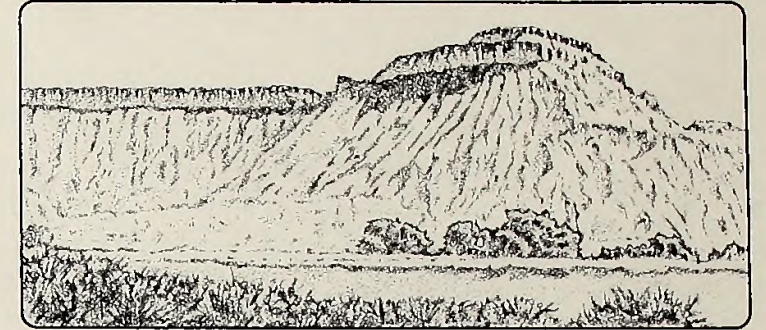
Scale in miles










GRAND JUNCTION RESOURCE AREA



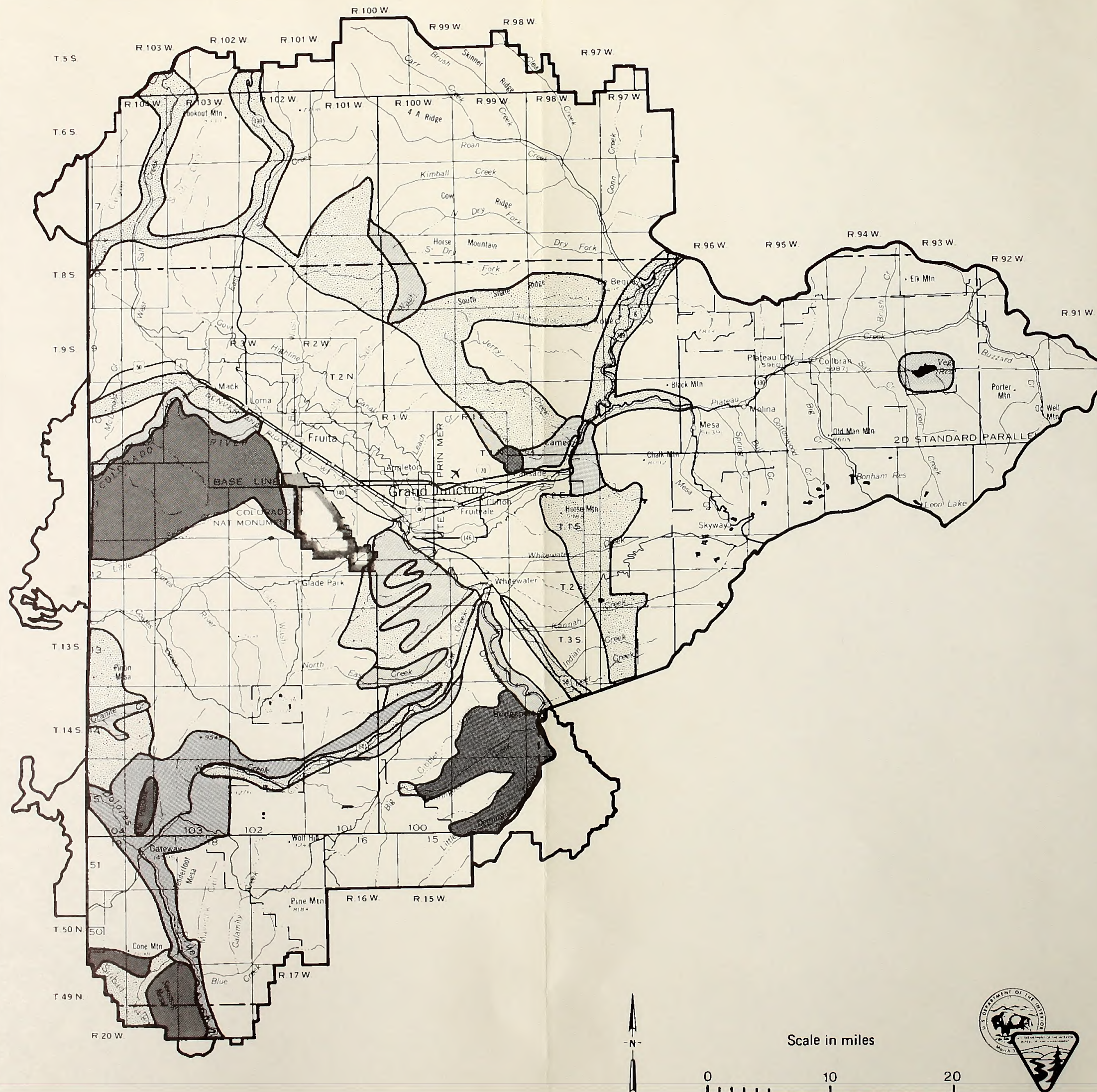
Resource Management Plan

RECREATION MANAGEMENT

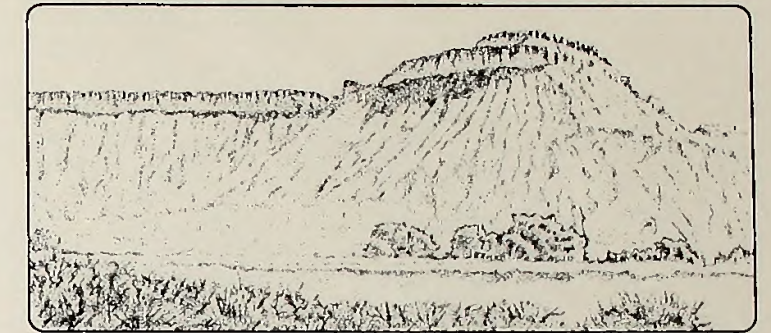
-  Protective management of river corridors and river use permits
-  Recreation opportunity spectrum management — semi-primitive non-motorized
-  Recreation opportunity spectrum management — semi-primitive motorized







GRAND JUNCTION RESOURCE AREA



Resource Management Plan

VISUAL RESOURCE MANAGEMENT Resource Management Classes



VRM Class I (preserve the natural characteristics of the landscape)



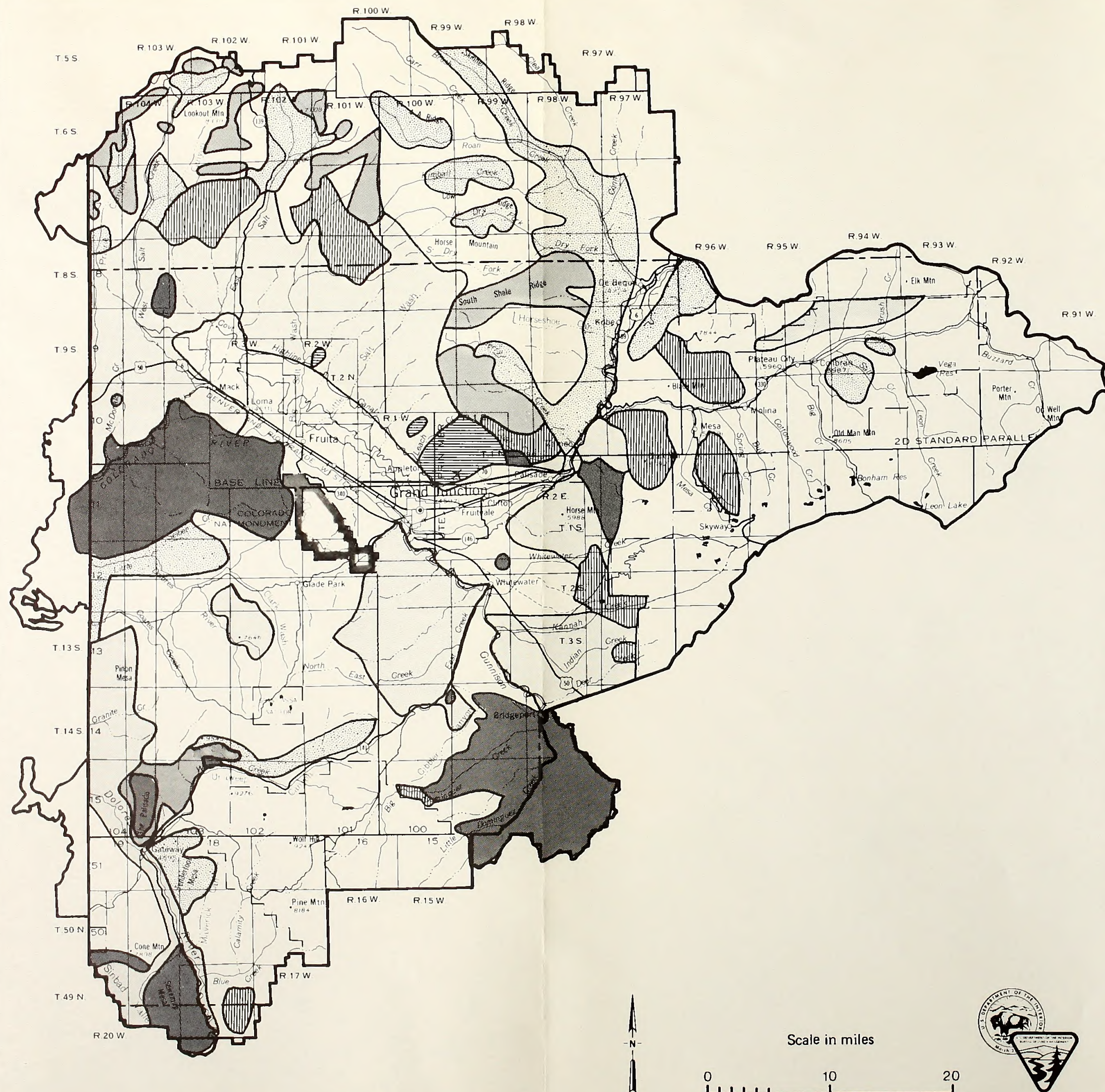
VRM Class II (retain the existing character of the landscape)



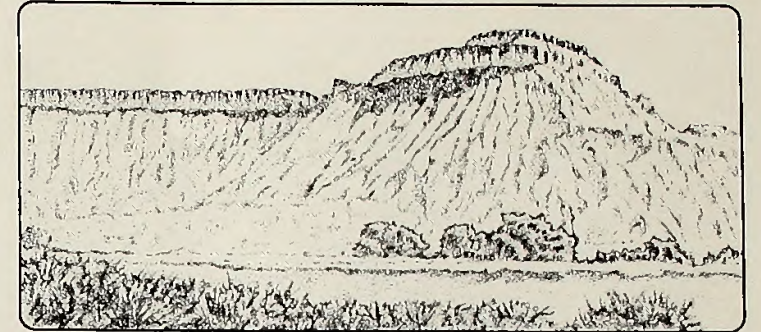
VRM Class III (partially retain the existing character of the landscape)

Scale in miles



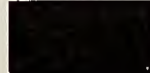
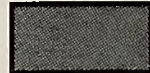
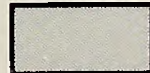

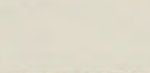

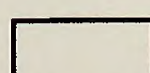


GRAND JUNCTION RESOURCE AREA



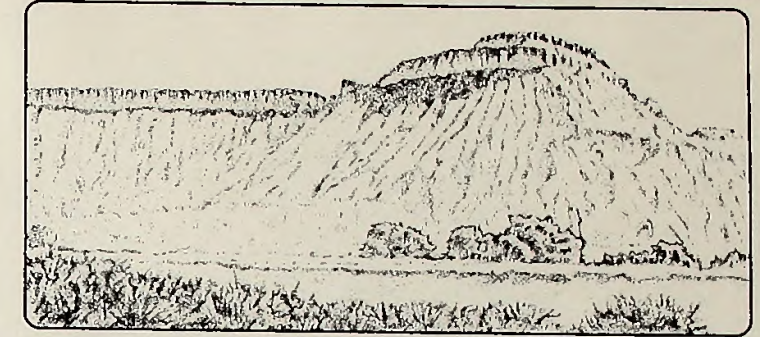
Resource Management Plan

OFF-ROAD VEHICLE MANAGEMENT Off-Road Vehicle Designations

-  Closed
-  Limited to designated roads
-  Limited to existing roads and trails
-  Seasonal limitations - closed part of every year, at other times limited to existing or designated roads
-  Seasonal limitations to protect big game species during harsh winters only
-  Open - general areas where no significant ORV issues occur
-  Open - suitable for competitive events and cross country use

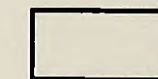


GRAND JUNCTION RESOURCE AREA



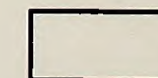
Resource Management Plan

SPECIAL MANAGEMENT AREAS



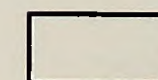
Research natural areas and areas of critical environmental concern

1. Unaweep Seep
2. Pyramid Rock
3. Gunnison Gravels
4. Rough Canyon
5. Fruita paleontological site
6. Rabbit Valley paleontological site



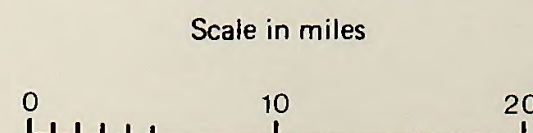
Outstanding natural area and area of critical environmental concern

7. The Palisade

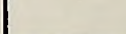

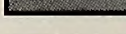


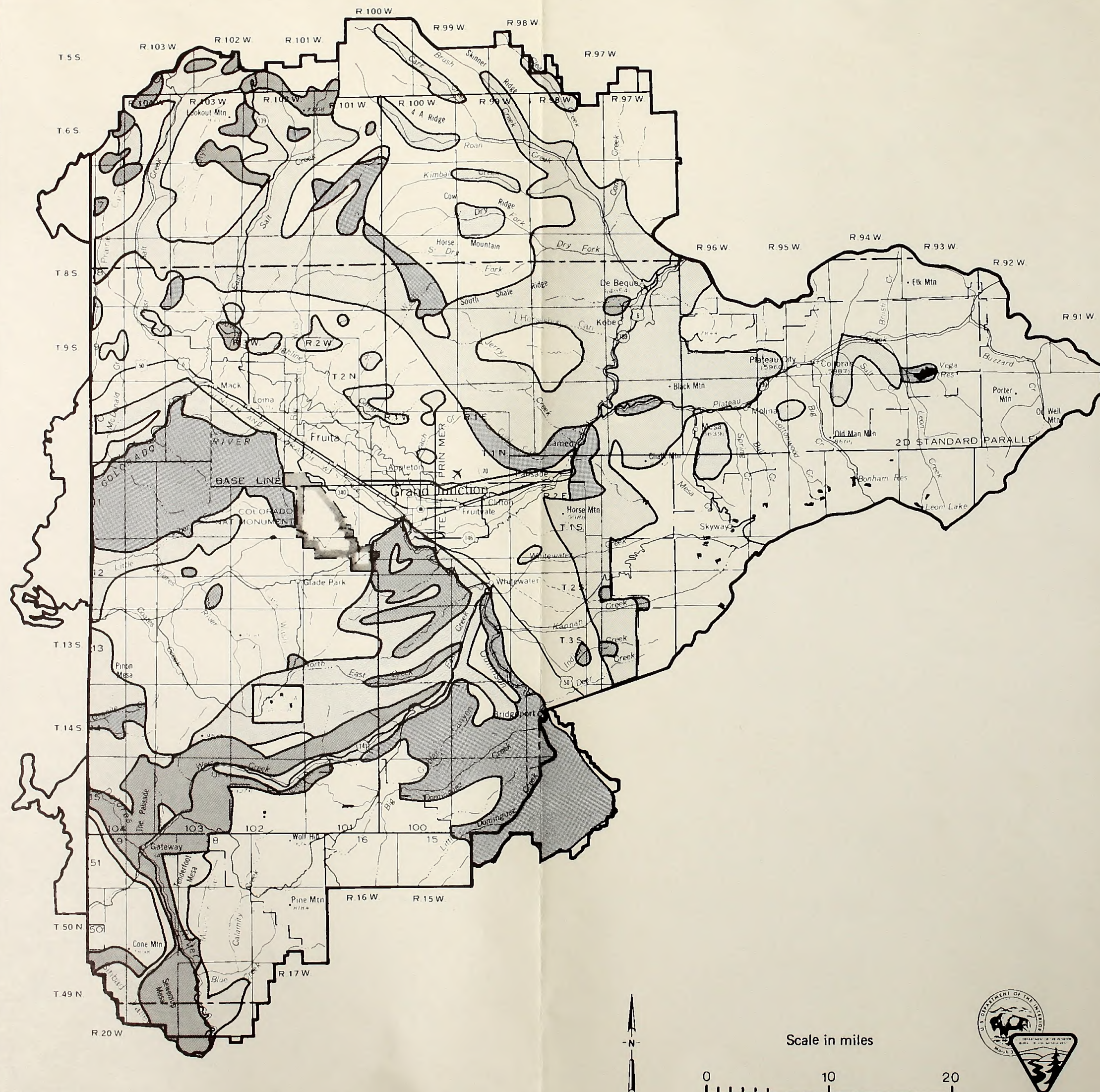
Area of critical environmental concern

8. Badger Wash Uplands

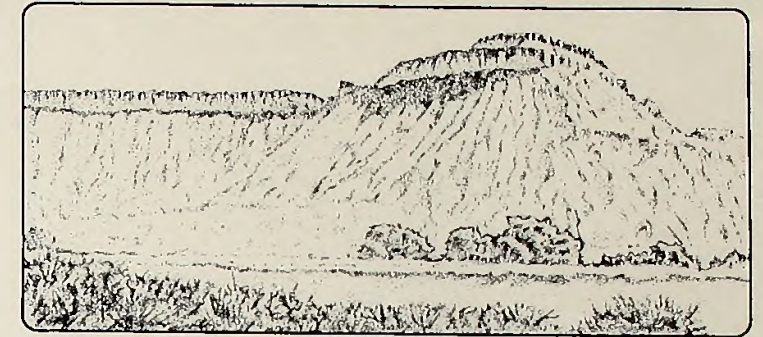


PUBLIC UTILITY MANAGEMENT Public Utility Restrictions

-  Suitable for public utilities
-  Unsuitable for public utilities
-  Sensitive for public utilities (excluding perennial streams and areas with slopes greater than 40%)



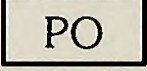


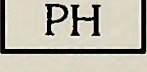
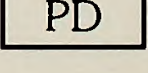


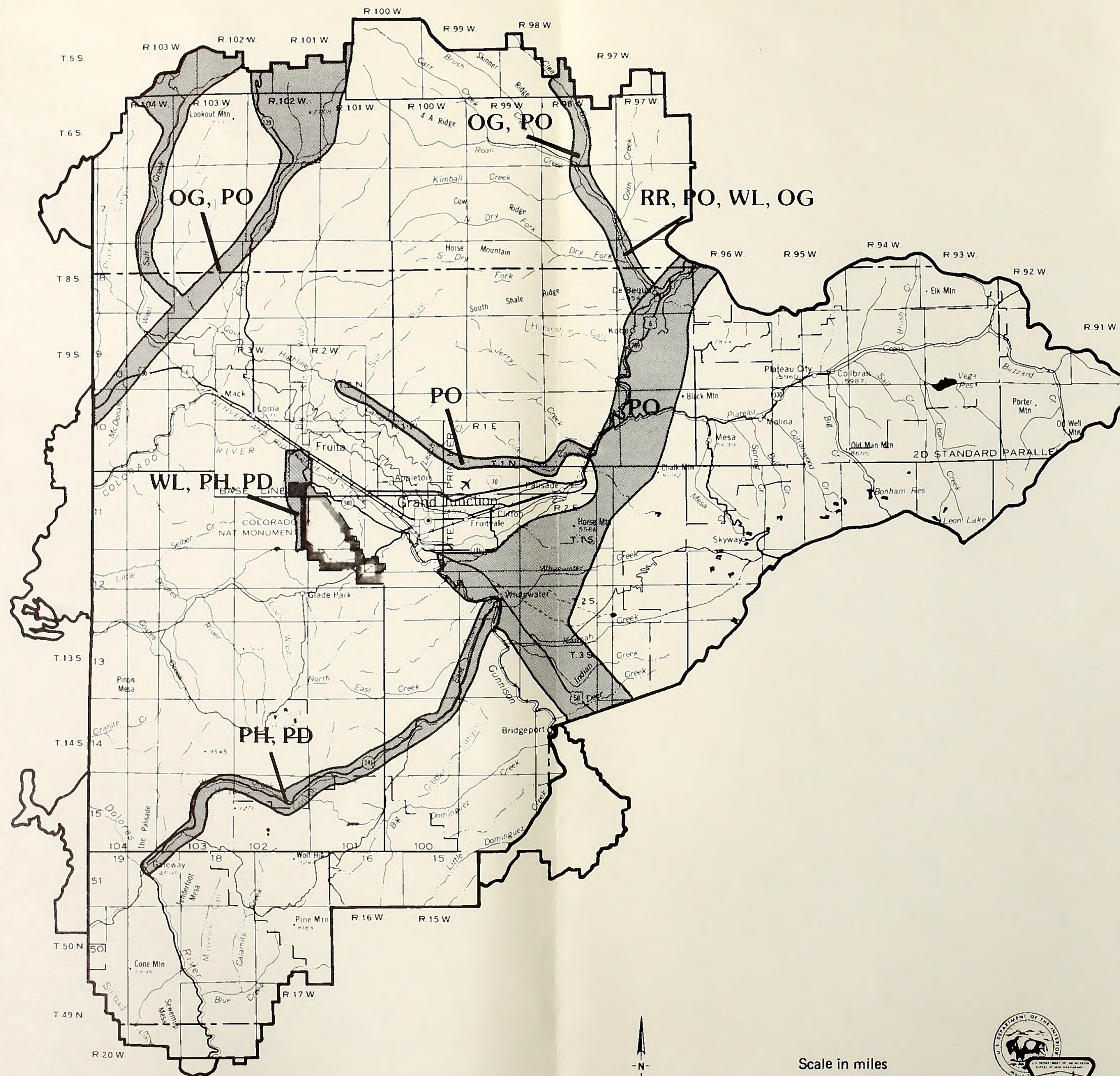
GRAND JUNCTION RESOURCE AREA



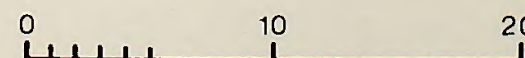
Resource Management Plan

PUBLIC UTILITIES MANAGEMENT

-  Public utility corridors
-  Railroad
-  Power line
-  Water line
-  Oil or gas pipeline
-  Telephone line
-  Power distribution



Scale in miles



MAP 20
EMPHASIS AREAS



NOTE TO MAP USERS

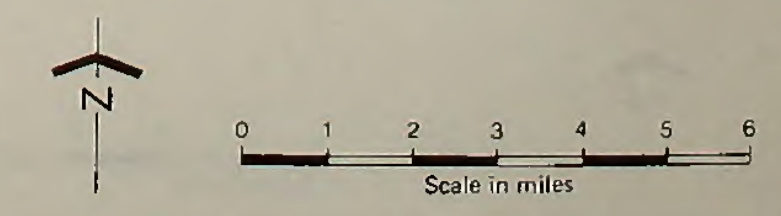
The surface and minerals management status overprints are published as general planning and management tools. Some of the lands, surface, and mineral rights, may have been shown as patented lands due to the lack of information available to BLM with respect to the nature of acquisition. Tracts less than 40 acres are usually omitted because of the map scale. Access through private lands may be restricted.

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This map does not meet National Map Accuracy Standards.



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Department of the Interior
Bureau of Land Management
Colorado State Office
Branch of Cartographic Services
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Denver, Colorado 80202



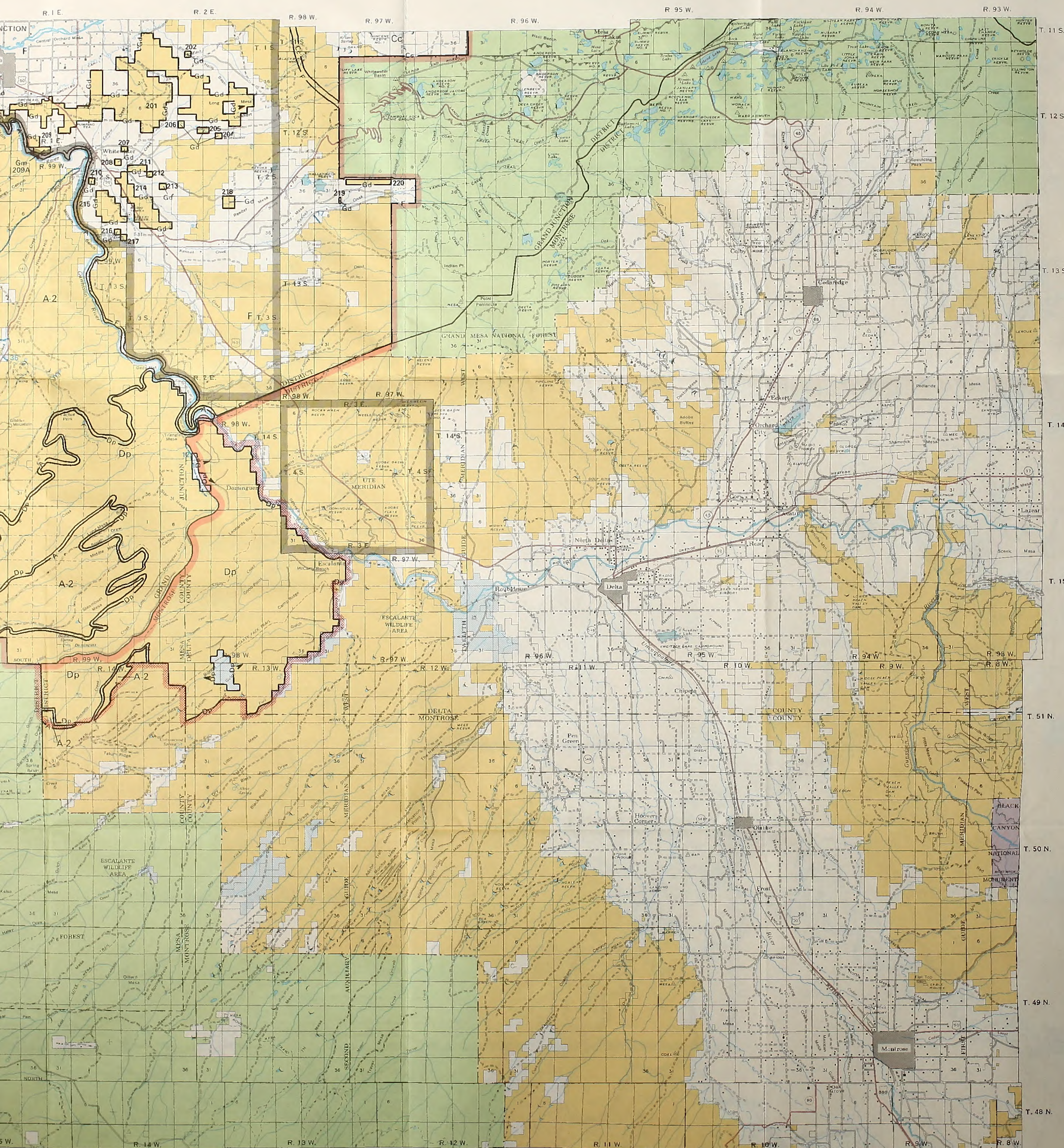


1986

GRAND JUNCTION RESOURCE MANAGEMENT PLAN

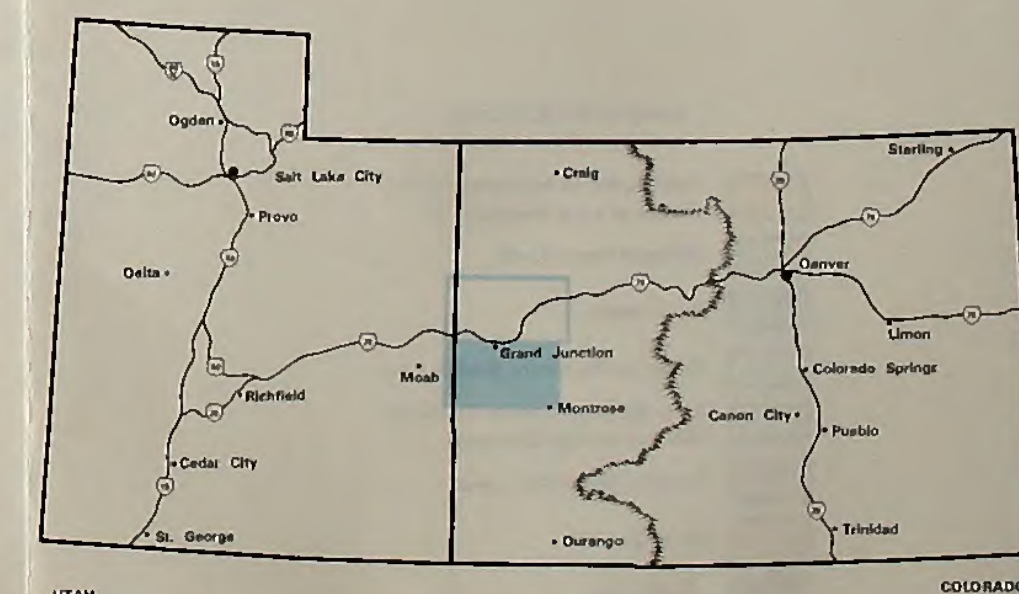
GRAND JUNCTION DISTRICT COLORADO

SOUTH 1/2



LAND STATUS LEGEND

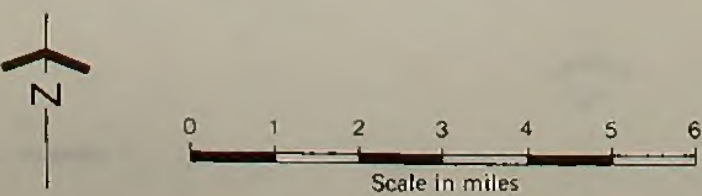
Public Lands (Administered by the Bureau of Land Management)	National Monument Lands
National Forest Lands	Ute Meridian
State Lands	Grand Junction Planning Area Boundary
Colorado Division of Wildlife Lands	Areas Outside the Grand Junction Resource Area being analyzed for livestock and/or wilderness only.
State Recreation Areas (Owned or Administered by Colorado)	



LEGEND

<p>EMPHASIS A - RECREATION</p> <p>EMPHASIS B - MANDATORY PROTECTION AREAS</p> <p>EMPHASIS C - MINERALS</p> <ul style="list-style-type: none"> Co - Acceptable for further coal leasing consideration Ce - Existing coal leases Co - Potential oil and gas leasing area <p>EMPHASIS D - WILDERNESS STUDY AREAS (WSA'S)</p> <ul style="list-style-type: none"> Di - WSA's Dp - WSA's found preliminarily suitable for wilderness <p>EMPHASIS E - WILD HORSE AREA (WHA)</p> <ul style="list-style-type: none"> Ee - Existing WHA boundary Ep - Proposed expansion to WHA boundary <p>EMPHASIS F - WATER</p> <p>EMPHASIS G - LANDS</p> <ul style="list-style-type: none"> Gd - Disposal tracts Gm - Cooperative management agreement tracts <p>EMPHASIS H - FORESTRY</p> <ul style="list-style-type: none"> Hc - Commercial forest land Hp - Productive piñon-juniper woodlands 	<p>EMPHASIS J - OFF ROAD VEHICLE DESIGNATION</p> <ul style="list-style-type: none"> Jd - Limited to designated roads and trails Je - Limited to existing roads and trails Jg - Group use area Jo - Open area <p>EMPHASIS K - GENERAL MANAGEMENT AREAS</p> <p>EMPHASIS L - AIR</p> <ul style="list-style-type: none"> Ld - Designated non-attainment area <p>EMPHASIS M - AREA OF CRITICAL ENVIRONMENTAL CONCERN</p> <p>EMPHASIS N - THREATENED AND ENDANGERED SPECIES</p> <p>EMPHASIS O - WILDLIFE</p> <ul style="list-style-type: none"> Oa - Aquatic and riparian habitat Ou - Upland wildlife habitat <p>EMPHASIS P - VISUAL RESOURCE MANAGEMENT (VRM)</p> <ul style="list-style-type: none"> Pv - VRM Class I areas
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* These resources are displayed on this map.



LEGEND

- **EMPHASIS A - RECREATION**
- **EMPHASIS B - MANDATORY PROTECTION AREAS**
- **EMPHASIS C - MINERALS**
 - Cc - Acceptable for further coal leasing consideration
 - Ce - Existing coal leases
 - Co - Potential oil and gas leasing area
- **EMPHASIS D - WILDERNESS STUDY AREAS (WSA'S)**
 - Di - WSA's
 - Dp - WSA's found preliminarily suitable for wilderness
- **EMPHASIS E - WILD HORSE AREA (WHA)**
 - Ee - Existing WHA boundary
 - Ep - Proposed expansion to WHA boundary
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 - Gd - Disposal tracts
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 - Jd - Limited to designated roads and trails
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- **EMPHASIS K - GENERAL MANAGEMENT AREAS**
- **EMPHASIS L - AIR**
 - Ld - Designated non-attainment area
- **EMPHASIS M - AREA OF CRITICAL ENVIRONMENTAL CONCERN**
- **EMPHASIS N - THREATENED AND ENDANGERED SPECIES**
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 - Ou - Upland wildlife habitat
- **EMPHASIS P - VISUAL RESOURCE MANAGEMENT (VRM)**
 - Pv - VRM Class I areas

* These resources are displayed on this map.

18
ACCESS ACQUISITION PROPOSALS



LAND STATUS LEGEND

- Public Land (Administered by the Bureau of Land Management)
- National Forest Lands
- State Lands
- Colorado Division of Wildlife Lands
- State Recreation Areas (Owned or Administered by Colorado)
- National Monument Lands
- Naval Oil Shale
- Ute Meridian
- Grand Junction Planning Area Boundary
- Areas Outside the Grand Junction Resource Area being analyzed for livestock and/or wilderness only.

1986

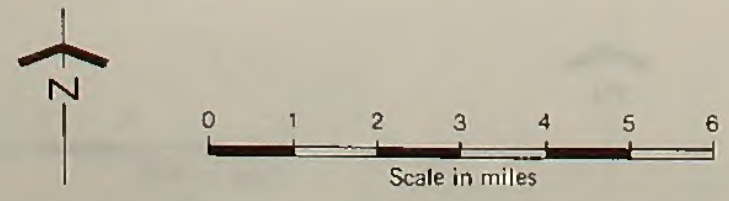
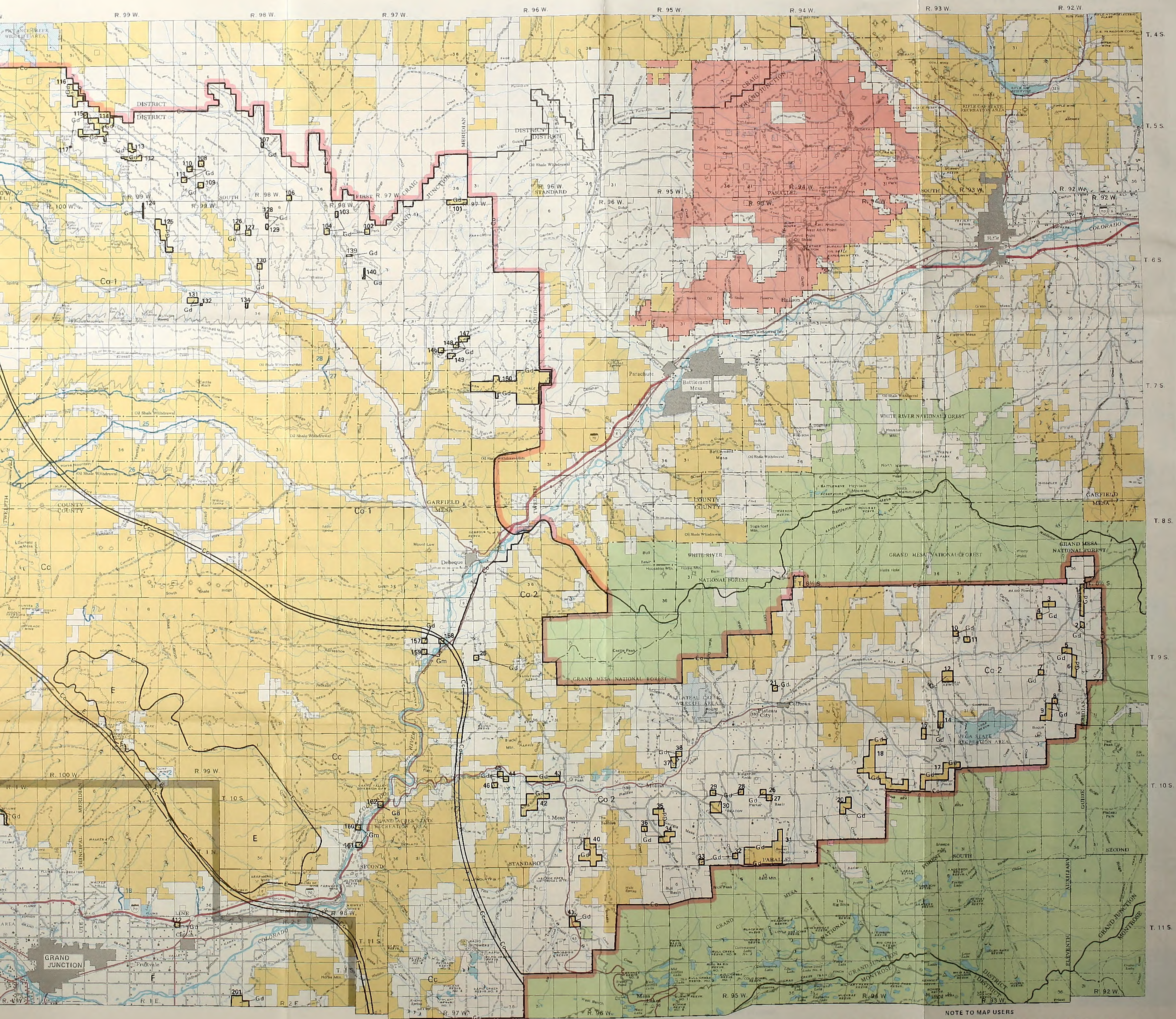
GRAND JUNCTION RESOURCE MANAGEMENT PLAN

GRAND JUNCTION DISTRICT
COLORADO

NORTH 1/2



0 1 2 3 4 5 6
Scale in miles



Produced by:
Department of the Interior
Bureau of Land Management
Colorado State Office
Branch of Cartographic Services
1037 20th Street
Denver, Colorado 80202

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